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ABSTRACT

The purpose of this investigation was to relate causes for dropping out of college to a wide range of characteristics of both the students and the institutions involved. Specifically, it aimed to identify entrance characteristics of types of college dropouts related to their sex and the institution's environmental presses. Comprehensive data were obtained on 2 complete entering classes at the University of Michigan. Two years later, additional data were obtained from a followup survey of Michigan dropouts as well as from dropouts from the University of Washington. A typology was developed consisting of social, academic, religious, and 2 intellective-cosmopolitan variables. Different entrance characteristics were found to be associated with different dropout types and varied consistently according to the sex of the student. Persisting students appeared to have the same problem and at the same intensity as dropouts. It was concluded that future research must take the student's sex and the type of dropout into consideration in designing studies. Data related to salient environmental presses should also be analyzed. And, attitudinal variables are more useful than demographic data in distinguishing among types of dropouts. (JS)

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AN INVESTIGATION OF ENTRANCE CHARACTERISTICS RELATED TO TYPES OF COLLEGE DROPOUTS

Final Report, Grant No. OEG-9-70-0033(057), May 1971

Robert G. Cope, Principal Investigator, University of Washington

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, Office of Education
National Center for Educational Research and Development (Regional Research Program)

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ABSTRACT

An Investigation of Entrance Characteristics
Related to Types of College Dropouts

Purpose: The objectives of the study were to identify the entrance characteristics of types of college dropouts in relation to their sex and the environmental presses of their institution.

Methodology: Comprehensive entrance data were obtained on two complete entering classes at a large public university. Two years later additional data were obtained from a followup survey of dropouts from this university as well as from dropouts from a second university.

Results: A typology of dropouts was developed consisting of social, academic, religious, and two intellective-cosmopolitan types. Different entrance characteristics were found to be associated with the different dropout types and varied consistently according to the sex of the student. Persisting students appear to have the same problem and at the same intensity as dropouts.

Conclusions: Future research must take the sex of the student and the type of dropout into consideration in the design of studies. Data should also be analyzed in relation to the salient environmental presses of particular institutions. Attitudinal variables are more useful than demographic data in distinguishing among types of dropouts.

FINAL REPORT

GRANT NO. OEG-9-70-0033(057)

AN INVESTIGATION OF ENTRANCE CHARACTERISTICS RELATED TO TYPES OF COLLEGE DROPOUTS

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U.S. Department of Health Education and Welfare
Office of Education
National Center for Educational Research and Development
(Regional Research Program)

PREFACE

Two studies of college dropouts are reported here. One study was with students at the University of Michigan, the other with students at the University of Washington. While the institutions and students are comparable, the "Michigan Study" was conducted in the early and mid-1960's and the "Washington Study" was conducted in the early 1970's. Our inquiries are thus institutionally and time related. Moreover, the institutions, the students and the times represent interdependent dimensions of the dropout phenomenon.

The research has been supported by the Regional Research Program, originally by Region IX and later by the newly created Region X. In an important sense this research was also made possible by the cooperation of students who took the time to complete our questionnaires and in many cases they wrote lengthy and insightful comments, thus helping us to interpret their attitudes.

The enterprise involved the contributions of a substantial number of individuals: secretaries, graduate students and colleagues. Donna Finnegan, Margery Mendenhall and the University Secretarial Pool were responsible for much typing, mailing, sorting and the help with the many essential details. Patsy Ethridge was unfailing in her advice and assistance in relating the project needs to both University and U.S. Office of Education requirements. Daniel Bowen provided us with excellent statistical analysis and proof reading.

The present report has emerged very largely from the minds and conceptualizations of Raymond Hewitt, Keith Pailthorp, Michael Skaling and David Trapp, and they have shared the tasks of data interpretation and writing.

The good judgment and skills given to this effort by Margery Mendenhall and Keith Pailthorp are especially appreciated.

If errors have nevertheless crept into this study, they are, of course, not theirs.

Seattle, Washington
May, 1971

Robert G. Cope

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CHAPTER ONE

INTRODUCTION

Robert G. Cope

Objective

The main purpose of this investigation was to relate causes for dropping out of college to a wide range of characteristics of both the students and the institutions involved. Thus the underlying orientation of the study follows a "congruence model" which views attrition as a function of the "fit" between the needs, interests and abilities of the student and the demands, rewards and constraints of a particular setting.

Given this orientation we were interested in differentiating the reasons for dropping out--academic, social and so on--backward to entrance characteristics, so we could say in what ways the person leaving because he felt, "the midwest and the University too provincial," differed from the person leaving because he, "couldn't find people to associate with socially," i.e., the too intellective/cosmopolitan dropout as compared to the social dropout. And how did the individuals who simply failed academically differ from those who either persisted or left for social reasons? Our findings in regard to these questions may be an aid in the better understanding of the nature of college environments and might eventually lead to what might be called an "early warning system."

The student characteristics that were examined in the Michigan portion of the investigation are at a number of different levels, from demographic characteristics and socio-cultural levels of the home, to individual interests, values and personality dimensions. The main variables were:

1. Continuity-discontinuity between home and university environment
   a. Demographic characteristics suggesting continuity-discontinuity with intellectual-cultural presses of the college--e.g., rural-urban background; size of community; social class background (occupation, income, education of parents).
   b. Intellectual and cultural family and community background--e.g., cultural interests of parents; college attendance of other family members; proportion of high school class going to college.

2. Openness to new experience
   a. Boundedness-openness of life goals--e.g., degree of certainty about vocational decisions.
   b. Venturesomeness; orientation toward new experience (curiosity about the new and different).
   c. Awareness of self: intraceptiveness.
   d. Expressiveness vs. inhibition, control.
   e. Flexibility, nonauthoritarianism.
   f. Cognitive styles: complexity, thinking introversion, creativity.
3. Skills and competences
   a. Academic capacity and achievement--as obtained by the Admissions Office (College Boards, High School grades).
   b. History of commitments in pre-college years--in high school activities, individually selected interests, group memberships.
   c. Self-concepts--assessment of own capacities.
   d. Autonomy--especially independence from parents (in values and decision making) and peers.
4. Other predispositional variables relevant to outcomes
   a. Values, interests, attitudes--especially those that are in some degree general, pervasive, or dominant, involving some degree of commitment--e.g., intellectual, social, aesthetic and religious values; orientations toward politics, national and international issues.
   b. Orientations toward college--e.g., goals for college, such as vocational, social, intellectual, "indentity-seeking;" orientations toward academic demands, including academic achievement motivation, internal-external motivation.
   c. Orientations toward future roles--student's assessment of post-college opportunities for providing needed rewards, and of their degrees of fit to himself, together with existing commitments to appropriate roles.

A copy of the instrument used to collect these data at the University of Michigan is illustrated in Appendix A. Appendix B illustrates the followup questionnaires sent to dropouts at Michigan and Washington.

The study also examines the relationship of attrition to characteristics that could not be placed clearly within any of these broad categories. They are included because they reflect important issues in studies of college students generally and seem relevant to the times in which these data were collected.

In the analysis the relationships of individual characteristics to attrition were examined separately for men and women respondents, on the assumption that the different needs and role expectations in our society would make different issues relevant for attrition for the two groups. The findings do indicate that some factors are related to attrition in the same way for both men and women, but a number of differences also appeared. Men and women tended to differ on attitudinal and value orientations. These differences, in general, were consistent with the cultural definitions of the masculine and feminine roles. Thus the aesthetic and social orientations, which are more central to the feminine role, were related to attrition for women students, but not for men. Feelings of adequacy and competence, more central to the masculine role, were related to attrition for men but not for women. The suggestion is offered that different types of discongruence may apply for men and women in the same environment.

Implications

The major general implication for research of our findings is to accent the importance of considering the interaction of environmental presses, personality characteristics, and sex role in studies of college attrition or any other aspect of the impact of an institution on its members.

The major implication for administration is to suggest that the problems of research, admissions, guidance, instruction, and so on are so complicated that we will not be able to solve for a long time to come the conditions for optimal individual development. In the meantime, students will make false starts and find it necessary to change directions. Therefore, any system of higher education must remain reasonably diversified, non-punitive, open and flexible while the human spirit remains complex, mobile, inconstant, volatile and....happily....defiant of easy classification and systematization.

Procedures

The procedures followed are detailed in later sections; however, this brief overview should help the reader find what interests him.

It should be pointed out that while this report covers two follow-up studies of dropouts these data are not comparable in all respects. The essential difference is that when the proposal was written all of the Michigan data had been gathered. Thus, it was only necessary--although a huge task--to reanalyze the information (about 1300 variables on over 1000 students).

Savings on the analysis of the Michigan portion of the study allowed sufficient funds for postage, envelopes, stationery, and clerical assistance, so that a much smaller study of contemporary dropouts could be conducted at the University of Washington. The following listing illustrates the major differences between these Michigan and Washington data:

Types of Data	University of Michigan	University of Washington
Freshmen Entrance Data (1300 items)	Yes[1]	No
Institutional Presses	Yes	No
Information from Continuing Students (about 20 variables)	No	Yes
Types of Dropouts	Yes	Yes
When was the followup study conducted?	1965-66	1970-71
Number of Students	1400	330

The main purpose of the Michigan study was to relate the types of dropouts to the entrance characteristics. The Washington study has provided further information on the typology, and has provided a more

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[1]Collected in 1962 and 1963 from two freshmen classes in the College of Literature, Science, and the Arts as part of a longitudinal study conducted at the Institute for Social Research by Professors Gerald Gurin and Theodore Newcomb.

recent comparison of the problems experienced by the dropouts as well as with those persisting.

The Chapters

Because there has not been a comprehensive review of the dropout literature in recent years chapter two details that research. The chapter following discusses, at a theoretical level, the nature of typologies. Someone who is not interested in a comprehensive review of past research, but who is interested in an overview with a discussion of the limitations of the prior research leading directly to this investigation, might find the remainder of this chapter satisfactory. These chapters provide the background for the discussion of the procedures followed and data analysis which is presented in chapters four through seven.

The Michigan phase of the study is discussed in chapters four, five and six, while the Washington study is discussed in chapter seven. Summarizing and drawing implications are left for the final chapter, eight.

Throughout the chapters our intent has been to move from the general to the specific, from question development to tentative answers and from lose ends to synthesis; we hope we have concluded with a conceptual framework that may lead others to new insights.

Background for this Investigation

While college attrition has been extensively studied, most studies have been too narrowly empirical to permit a meaningful integration of knowledge. The conferences and reviews devoted to this issue have in the main been expressions of dissatisfaction with what is known (Knoell, 1966; Summerskill, 1962; Waller, 1964). This does not imply that data emerging from research on dropouts are totally lacking in significance or value. For example, a number of studies have provided significant data by helping delineate the nature and scope of the dropout problem; they have provided important information on the rate of dropout (Iffert, 1958; Summerskill, 1962) and the historical trends in these rates (Pervin, 1965; Summerskill, 1962).

Rates of Attrition: National

National studies on attrition rates of college and university students over a "normal" four-year college career have shown a rather constant picture since the first major study (1938) indicated that approximately 45 percent of the entering freshmen never achieve a baccalaureate degree (McNelly, 1938). In a similar nationwide study conducted in the 1950's

at 147 institutions it was estimated that 40 percent of the entering freshmen never graduate (Iffert, 1958). More recent comprehensive reviews of the literature such as that in the report by Skaling and reports of national sample surveys (e.g., Panos and Astin, 1968) add support to the above findings, i.e., nationwide from 40 to 45 percent of the entering freshmen never achieve a baccalaureate degree. The loss rate among community college students is probably higher, but there does not appear to be any study to document it.

While the rates have not changed there has been a historical change in the nature of the dropout phenomenon toward fewer academic failures and more voluntary dropouts (Pervin, 1965). Student dissatisfaction appears to be increasing as a motivating force behind dropouts from college, while academic failure is decreasing in importance (Newman, 1971).

While these national studies do provide some broad guidelines, there appear to be questions about their reliability, particularly in regard to the sex of the student. For example, results in national studies may be effected by changes in the economy as well as the conflicts in Korea and Viet Nam. Changes in the economy have an unknown effect on college going and at least men may stay in college at times to avoid military service. The national studies not conducted during substantial military operations and while the economic scene was stable found women's "on time" graduation rates to be better than men's (Irvine, 1965; Trent and Ruyle, 1965). Perhaps more significant, the studies reported that these rates differ substantially from institution to institution. In some colleges men graduate on time in higher percentages than women; in other institutions the reverse is true. One of the studies found women's "on time" graduation rates decreased as the ratio between men and women increased, suggesting (perhaps) that the women desiring marriage attend institutions with large male populations (Astin and Panos, 1969).

In summary, despite some questions about the reliability and interpretation of gross national figures on attrition most authorities would, it seems, agree with the conclusion that approximately 40 percent of the entering freshmen students never achieve a baccalaureate degree. An additional 20 percent do not graduate on schedule; they return to graduate later at the same college or transfer to another institution. These rates do not differ substantially for men and women. There has been, however, a

change in the nature of the dropout phenomenon toward fewer academic failures and more voluntary dropouts.

Rates of Attrition: Institutions

Withdrawal rates from particular institutions vary considerably, therefore indicating the caution that must be exercised in interpreting gross national statistics. The author, examining attrition rates at the end of each of eight semesters at 28 colleges and universities, found the following cumulative attrition to be the norm: first semester 8.6 percent; second 22 percent; third 28.5 percent; fourth 33.2 percent; fifth 43.1 percent; sixth 44.5 percent; seventh 48 percent; and at the end of the eighth semester 50 percent of the entering students had withdrawn. The less selective institutions were found to have the highest dropout rates. The attrition rates were generally higher at state-supported institutions than at private institutions. The variation, however, in attrition rates among the institutions after four years was substantial, ranging from as little as 10 percent to as high as 80 percent; these differences are similar to reports from other studies (e.g., Newman, 1971). The greater proportion of attrition occurs during the first two years and the greatest proportion of withdrawals are among the academically less talented (Eckland, 1964; Trent and Medsker, 1967).

Surprisingly, many studies have found that the majority of withdrawing students were doing satisfactory academic work (at least "C" average) at the time of withdrawal; and many of these students, especially at the more selective institutions, are leaving because of dissatisfaction with the educational process, the social environment, and their desire not to get "caught up in a meaningless rat race" (Cope, 1967; Hirsch and Keniston, 1970; Knoell, 1960).

Causes of Withdrawal

While figures are useful in obtaining a general picture of the rate of attrition in gross statistics, little data are available on the causes of college withdrawal. Constance Waller in a review of the research over a period of forty years attributed one-third of the withdrawals to academic reasons, one-third to financial reasons and the remaining third to motivational factors (Waller, 1964). John Summerskill's earlier review and Michael Skaling's present review of the literature are more definitive in identifying the factors associated with withdrawals from college; it

is clear from their analysis that our knowledge about attrition despite the number of studies is surprisingly meager.

Studies on particular populations of college youth have been somewhat more definitive in terms of reasons for withdrawal. Academic readiness is the most common variable examined. As expected, the average score on aptitude tests has been found to be significantly lower for dropouts than for graduating students; however, academic ability alone does not play a significant part in determining who will drop out of the more highly selective institutions (Cope, 1967; Pervin, 1965). It would seem that while tests of academic aptitude do help distinguish between potential dropouts and persisters we cannot place much predictive reliance on differences in test scores.

On some demographic characteristics there have been no consistent relationships with attrition across studies. With respect to sex, for example, findings have consistently supported the fact that males and females have different reasons for withdrawal--men tending to cite internal and academic reasons while women more frequently mention external and non-academic ones (Astin, 1969; Gurin, Newcomb and Cope, 1968). It has seemed clear to the authors of this report that in order to understand the reasons for attrition among men and women, it is critical to view attrition in a way that takes account of the differences in the needs and values of men and women in our society and how these needs are differentially gratified in different types of institutional settings. It is striking to note, in this connection, not only that such interactive approaches have been rare, but that a great many reports on attrition do not even present the basic data separately for male and female students.

Studies related to school size or size of community are common, but there are no consistent relationships (Cope, 1971; Hoyt, 1959; Watley, 1964). Like much of what has been discussed there appears to be no easy generalization. School or community size may be closely related to such factors as: levels of socioeconomic status, differences in facilities, teacher salaries, class size, available curricula, and differences in communities. For instance, who can say that a large high school in an academic community is similar to a school of comparable size in the heart of a large city?

Socioeconomic factors are about the only dimension found to be related to attrition in a fairly consistent way. Several indices of social

class (father's occupation, parents' education, family income, and so on) are directly related to final graudation (Astin, 1964; Astin and Panos, 1969; Trent and Ruyle, 1965). The relationship of persistence toward graduation with socioeconomic background is, however, somewhat ambiguous in meaning. Part of the relationship is probably due to the fact that a student needs money to pay his fees and remain in the institution. Financial difficulties are quite frequently mentioned by both sexes as a reason for withdrawal (Iffert, 1958; Trent and Medsker, 1967). However, a number of researchers hold the view that the socioeconomic status may be a more important factor in attrition than the economic ones and it is the parents' encouragement of the pursuit of intellectual and educational values that is the crucial issue (Gurin, Newcomb and Cope, 1968; Trent and Ruyle, 1965).

When we leave the domain of demographic characteristics and look at the studies that have related attrition to motivational-personality dimensions the findings are not usually comparable because investigators approach the problem from particular theoretical orientations and utilize personality measures derived within that orientation. Nevertheless, it has been found that autonomy is a trait that clearly distinguished college dropouts and graduates; graduates are more independent in their thinking, resort less to stereotyping and are less dependent upon authority; those graduating are more open and tolerant of other people and ideas (Trent and Ruyle, 1965). On the other hand, dropouts have been found to be much less self-confident, less clear about a philosophy of life, and less sure of their capacity to cope (Hirsch and Keniston, 1970).

Many high ability withdrawals are more likely to be among those who enjoy reflective and abstract thinking, are more interested in artistic activities and are less interested in the practical and applied approaches to life. Many present-day dropouts are also among those who are involved in protest and off-campus experiences (Mock and Yonge, 1969; Rossman and Kirk, 1970). One of the purposes of the Washington phase of this study was to see if protest and off-campus experiences were related to dropping out.

Institutional Characteristics

While most of the studies on factors related to attrition have focused on individual rather than institutional characteristics, the latter have not been completely neglected in research. The most systematic

analysis has been the work of the American Council on Education. They have approached the issue of the dropout with a congruence model. This research model indicates what institutional characteristics add to the likelihood of dropping out once the individual input variables have been systematically considered (Astin, 1964; Panos and Astin, 1968). One of the findings to date is that the major influence of the university environment is to increase the student's chances of dropping out (Astin and Panos, 1969). We can expect useful results from the ACE's longitudinal investigations.

In the meantime, a number of other programs of research now under way have adopted a congruence model. For example, Lawrence Pervin and Donald Rubin at Princeton have been concerned with perceptual congruence, relating probable dropout for non-academic reasons to the discrepancies between a student's perception of his self and his college, his self and other students, his college and the ideal college. Where there are high degrees of discordance the likelihood of dropping out increases (e.g., Pervin, 1965).

The congruence model has also occasionally been applied in relating attrition to different subenvironments within a given institution. Individuals and their dormitories and other social groups have been classified according to their "academic" or "non-academic" orientations and indications are that academic failure is greatest where there was a discongruence between the dominant orientation of the individual and that of his reference group (Gurin, Newcomb and Cope, 1968).

The influence of studies designed around person-environment interaction models can be seen increasingly in the interpretation given to results in studies of dropouts even when the research was not specifically designed around such a model. Thus, Robert Suczek and Elizabeth Alfert (1966) in interpreting the unexpected finding at Berkeley that dropouts "in good standing" were more mature, sophisticated and less narrowly conventional than the non-dropouts, suggested that these dropouts' maturity may have made them dissatisfied and uncomfortable with the petty and restrictive demands of their environment.

Conclusions

The issue of college attrition has obviously received extensive study. Research, however, has for the most part derived from the practical and occasionally social concerns of college administrators. It has only

recently become an area of more theoretical concern. Thus, the literature on this issue provides a vast accumulation of data, but few efforts to interpret or tie the isolated facts together. In general the studies on dropouts have been too disparate and narrowly empirical to permit a more meaningful general integration of knowledge.

Much of the information on dropouts suffers from one or more of the following difficulties. The national surveys, while they are useful preliminaries, do not tap the complex reasons and motivations for leaving college; they do, however, indicate the extent of the problem and suggest areas to be examined.

Few of these studies penetrate beyond the demographic level to explore some of the social and psychological influences on dropping out. And most of the investigations, like those of hometown size, are single variable studies, apparently assuming that a particular variable can be used directly to assess academic performance or the likelihood of withdrawal.

Most of these single variable investigations appear to take an oversimplified approach to the problem. For instance, variables may operate concurrently as moderating factors, suppressing factors or accentuating factors relative to other variables and academic performance or withdrawal. That is, a given variable may be directly related, inversely related, or unrelated to other variables depending upon the influence of the other unmeasured factors. The usual attempt has been to look for certain basic personality characteristics that would help one arrive at a generalized concept of the "dropout personality" rather than for those types of individual orientations that might have differential relevance for attrition in different types of institutional settings.

Related to the oversimplification is the apparent lack of differentiating between the sexes in many of these studies. There are at least two reasons for considering sex in studies of academic performance. First, findings of previous research suggest that ability and academic performance are significantly more highly correlated for females than for males. Therefore, to group them together lowers the magnitude of correlations and lessons our ability to understand the problem. Much of the research also pays little attention to the fact that these students are theoretically in a developmental stage somewhere between childhood and adulthood. And while this developmental stage has certain common needs for men and women (e.g., self-definition, developing a "philosophy of

life") there may be developmental tasks that are different for men and women. Thus, variables that are predictive of performance of withdrawal for females may be different from the variables that are predictive in the case of male students. Not to separate them for the purpose of analysis or action programs obscures possible variables that are sex related.

Defining dropouts appears to be another problem. Leaving college before graduation is often considered a unitary act. This obscures a number of distinct phenomena. For example, some students may enter college with no intention of completing the baccalaureate. Perhaps they are merely attending to satisfy parental wishes, to marry or to avoid draft. For them dropping out is merely an expression of an original plan.

Among the students who originally plan to complete their academic program, the reasons for dropping out are often complex and overlapping. Among the non-academic reasons may be boredom, a "sense of wasting time," moderate financial hardship, lack of motivation (whatever this is), psychiatric problems (perhaps aggravated by the college experience), and so on. Thus several factors may simultaneously be involved in withdrawal from college, therefore making neat definitions difficult.

Furthermore, quite distinct phenomena may be operating when students leave, never to return to any college. Some students may leave temporarily and return to the same college; other students merely transfer to another college. The point is that research and reporting which lumps together all of these actions and reasons under a single heading is likely to obscure or confuse quite distinct phenomena.

The growing body of data indicating that half or less of those dropping out do so because of academic difficulties should give us pause to think. While we often know how many students are asked to leave the institution we seldom know anything about the students who voluntarily withdraw. They just do not show up the following semester. The dean's office may never know where they are or what has happened to them. As a result, college records are often incomplete and dropout information is available only in terms of the number of those who notify the dean that they have withdrawn voluntarily. For example, the results of Suczek and Alfert (1966) paint a very different portrait of the dropout than is provided by most other studies. In their analysis they separate dropouts who were in good standing when they left Berkeley from those who were

failing and found that these two types had quite different personality profiles. The dropouts in good standing were more "mature" than the failing dropouts or continuing students. Since most studies of factors related to attrition have not made this distinction between the two types of dropouts, one cannot say whether the picture of the voluntary dropouts presented in the study by Suczek and Alfert would be replicated in other studies that also made this distinction, or whether the differences between the picture of the dropout that they present and the one that has usually been portrayed reflects the fate of students with these personality characteristics in a particular environment.

The final limitation in most research has been that studies attempt to ascertain the psychological characteristics of dropouts versus non-dropouts without considering the characteristics of the institution they are leaving. This approach seems to be inadequate. Dropping out is a transaction between an individual and an institution. For example, the student likely to drop out of an unstructured and "progressive" liberal arts college may be very different from the dropout from a traditionalistic religious college. Data which ignore the institutional context will rarely generalize from institution to institution.

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CHAPTER TWO

REVIEW OF THE RESEARCH LITERATURE

Michael M. Skaling

The last major review of college dropout literature was published in 1962 by Summerskill. Since then there have been over 150 attrition studies. Now with an increase in the use of data processing, with the development of more sophisticated research procedures and designs, and with a continuation of census type and single variable studies, the existing knowledge on dropouts needs once again to be critically examined. The purposes of this review, then, are to identify problems and shortcomings existing in the literature and to suggest new and worthwhile directions which would increase our understanding of college dropouts.

The approach of this review will be to systematically consider four general categories of variables: biographical; pre-college educational; psychological; and institutional environmental variables. Subdivisions within these categories will be made where relevant. Some studies reported before Summerskill's review (1962) will be considered if they aid in pointing out the limitations or assets of particular variables.

Biographical Variables

Sex. Attrition studies which have controlled for sex as an independent variable report conflicting findings in the relation of sex to dropping out. Several studies have shown that the attrition rate is slightly higher for women than for men. (Holmes, 1959; Spindt, 1961; and Astin, 1964). Several other studies reported that males tended to have a higher attrition rate than females. Ifferet (1957) in his nationwide study found that men have a higher attrition rate (61 percent) than women (59 percent), however, he did not regard this difference as significant. Furthermore his study is potentially biased in that the Korean War was taking place at the time. Knoell (1960) in her studies at California state colleges reported that more men are dismissed for academic reasons than women but that the voluntary withdrawal of women over the four years tend to equalize the attrition rate. Hill (1966) similarly found in a study at the University of Texas that three times as many men as women were dismissed for academic reasons, but he also found that more men than women reentered after a forced withdrawal.

Slocum (1956) in a study at Washington State College on the entering students of 1951 found little difference in the dropout rate between men and women during the first year, but the dropout rate in each of the succeeding years was higher for women than for men.

Several other studies report little or no variation in the attrition rate for males and females (Cummings, 1949; Iffert, 1954; Johnson, 1954; Summerskill and Darling, 1955; Pattishall and Banghart, 1957; Suddarth, 1957; Halladay and Andrew, 1958). Panos and Astin (1967) found that sex and persistence in college were unrelated; however, when the controlled for high school grade averages, they found that women are more highly selected than men and often entered college with better high school academic records.

While there have been diverse findings relative to sex differences in rates of attrition, researchers have found consistently that the reasons given for dropping out do differ between the sexes. (Sheeder, 1939; Harris, 1950; Summerskill and Darling, 1955; Slocum, 1956; Iffert, 1957; Summerskill, 1962; Astin, 1964; Otto and Cope, 1965; Panos and Astin, 1967; Cope, 1970).

Table 1 illustrates the differences given for dropping out for the sexes. The reasons differed somewhat over the ten year time span between the Iffert (1957) study and the Panos and Astin (1967) study. Three studies agreed finding the major reason given for women dropping out was marriage, whereas in three studies men tended to drop out more for dissatisfaction with college (Panos and Astin, 1967) and motivational or lack of interest reasons (Panos and Astin, 1967; Iffert, 1957). Ranking high as a reason for dropping out, finances were fairly consistent across the three studies and for both sexes. Males more consistently than females seemed to attribute their dropping out to low grades. Frequently cited by both males and females was dissatisfaction with the college environment, lack of interest in studies, uncertain career plans and uncertain major. All the studies seem to imply that many dropouts were citing reasons of motivation and unclear goals as motives behind their decision to withdraw.

The major difference between the two early studies (Iffert, 1957; and Slocum, 1956) and the latest study (Panos and Astin, 1967) is that the reasons given for withdrawing in the more recent study generally show that students in the 1960's were withdrawing more due to

TABLE 1

Reason Given for Dropping Out by Sex and Study

(For Students who Entered College in the Fall of 1950, 1951, and 1961)

	MALES			FEMALES		
	Iffert '57 (1950)	Slocum '56 (1951)	Panos-Astin '67 (1961)	Iffert '57 (1950)	Slocum '56 (1951)	Panos-Astin '67 (1961)
1.	lack of interest in studies (48%)	financial (45%)	dissatisfied with college environment (26.7%)	marriage (49.2%)	marriage (44%)	marriage (29%)
2.	military enlistment (45.2%)	uncertain career plans (43%)	need time to reconsider goals, interest (26.4%)	took full-time job (37.2%)	financial (31%)	dissatisfied with college environment (27%)
3.	financial (self) (41.4%)	low grades (41%)	financial (23.6%)	financial (self) (36.4%)	uncertain major (27%)	changed career plans (20.7%)
4.	low grades (40%)	uncertain major (41%)	changed career plans (22.1%)	lack of interest in studies (33.1%)	uncertain career plans (24%)	financial (17.8%)
5.	financial (family) (29.7%)	military service (40%)	low grades (15.5%)	financial (family) (32.3%)	low grades (24%)	need time to reconsider goals, interest (17.7%)
6.	studies too difficult (26.5%)	studies too difficult (27%)	marriage (7.8%)	low grades (22.9%)	studies too difficult (17%)	pregnancy (8.2%)
7.	military (drafted) (24.6%)	uncertain about aptitudes (25%)	scholarship terminated (2.8%)	studies too difficult (19.9%)	location of college (15%)	tired of being a student (6.0%)

dissatisfaction with the college environment and had unsettled personal interests and goals. In other words, over the past fifteen or twenty years there has been a change in the reasons for dropping out, suggesting that students today are more contemplative and more greatly affected by the relevancy of their education and development of their self identity.

One important difference which has not yet been considered between the two early studies and the Panos and Astin study is that of the military service. The two studies which were taking place during the Korean conflict report that military service was a major reason given for dropping out. Iffert found that 45.2 percent of the withdrawing males reported military enlistment as relative to their decision to drop out. Slocum in his study of the entering class of 1951 found that 40 percent give military service as a reason for withdrawing. Panos and Astin, though, in their studies of students during the 1960's reported that only 1.4 percent cited military draft or enlistment as their major reason for dropping out, and an additional 10.9 percent cited it as a minor reason for withdrawing. A possible explanation of the great differences in the military withdrawal rate is that the real reason for dropping out may not have been to enlist in the military service but rather for motivational or other adjustment problems. Enlisting in the military service was a more acceptable reason for discontinuing college since the country was relatively unified in its foreign policy positions. Now when there is great dissent, especially on college campuses, over the United States Government's involvement in Viet Nam it is no longer normatively legitimate.

In conclusion, the literature is somewhat unclear as to the relation of sex to the attrition rate. It is clear that sex when used alone is not a good predictor of dropping out. The research findings do however suggest that when sex is used in conjunction with other variables it helps identify, predict, and explain dropout behavior.

Age. Several studies reviewed showed that age when considered by itself does not seem to contribute significantly to the prediction of who will drop out. However, the studies generally show that the withdrawal rate is slightly higher for older students than for younger students. For example, Summerskill and Darling (1955) found that older students were more likely to graduate. Farnsworth (1955), on the other hand, found that early admissions students who were younger did not

differ significantly in withdrawal rates or in their reason for withdrawal from regularly admitted students. Thompson (1953), Suddarth (1957), and Gable (1957) found in studies of three different colleges that there was no significant difference between younger and older students in their dropout rate. Bragg (1956), however, did mention that although the difference was not significant, dropouts tended to have a higher mean age and a wider age range. More recently Gonyea (1964) reported that permanent dropouts at the University of Texas were slightly, but significantly, older than persisting students. Similarly Chase (1965) in a study of entering freshmen at Indiana University found after the first year that dropouts were disproportionally represented in the higher age groups (20 years and more).

Age, then, when used by itself, is not a good predictor of dropping out. Furthermore, since the general college population is primarily of the same general age group, age differences are perhaps only relevant for those institutions which have a high proportion of older students. The significance of the age variable lies not in age itself, but rather in the increased experience, diversified extra-academic demands and responsibilities, and pressures that older students experience.

Marital Status. Several studies found that girls frequently cite marriage as the primary reason for withdrawing (Slocum, 1956; Iffert, 1957; and Panos and Astin, 1967). Males less frequently cite it as the major reason. However, while several studies reported that marriage after admissions to college was a major reason given by women for dropping out, only one study reviewed employed marriage previous to college entry as an independent test variable against the dependent variable of dropping out. Panos and Astin (1968) in a national study found that the dropout was more likely than the non-dropout to have been married when he entered college.

It would seem reasonable that students who were married before entry to college or married during the first few semesters would experience greater problems in remaining in school than those students who are married a short while before graduation. It also seems reasonable that married students would take longer to finish their degrees as their time is often divided between working to support a family and studying. One would logically expect that married students with children would have a higher dropout rate and would take longer to

finish college than would the single student or the married couple. No studies have been reviewed which took into account the effects of having children while in college. Littrell (1960) using marital status as a variable found in a study based on 175 students who left school that 33 single male students in the youngest age group (17-21) withdrew. The second highest withdrawal group was for married male students in the 22-26 age group: 24 withdrew. However, this study did not show what percentage of each of the two groups dropped out. If this percentage was taken, it seems reasonable, based upon the low number of students who are married as undergraduates, that the dropout rate for married students would be much higher than that of single students.

Military Status. Only one study was cited that tested for the persistence of veterans in college. The Office of Admissions at the University of California (1948) found that after the Second World War students admitted under the regular admissions standards had a 4-6 percent withdrawal rate as opposed to a 7 percent withdrawal rate for veterans.

From the lack of studies and from the time change since World War II it would be impossible to say what the rate would be now. However, as mentioned in the section on age, it would seem that veterans would be an older group and more likely to have circumstances surrounding their lives (marriage, children, desire to get a job) which would make it more difficult to return to college and persist. However, with the G.I. Bill, finances would be less of a problem and perhaps the reason for dropping out would be more due to lack of "fit" between college life and the needs of the older students, who feel that many of the day to day activities are irrelevant and a waste of time. With the Viet Nam War in progress and many veterans returning to college researchers should again look at the reasons given for dropping out and the withdrawal rates of returning veterans.

Religion. Only occasionally has religion been employed as a test variable in attrition studies. Cope (1967) has the most definitive statement on the relation of religion to the dropout rate. In a study of the entering freshmen classes of 1962 and 1963 at the University of Michigan's College of Literature, Science, and the Arts, Cope found that Jewish males had a much lower dropout rate than did Roman Catholic and Protestant males and that the Jewish male was more likely to persist

than was the Jewish female. Religion did not seem to be related to the female attrition rate, but it was for the males. Of the male dropouts, Cope found that 43.6 percent were Protestant, 21.8 percent Catholic, and 8.9 percent Jewish; compared to persisting students of which 37.8 percent were Protestant, 14.6 percent Catholic and 26.9 percent Jewish.

Summerskill and Darling in a study of large eastern universities with high academic standards, published findings similar to those of Cope. They suggested the great difference illustrated the influence of subcultural values and style of life on the motivational and achievement values of students who identified with the subculture. Given the cultural value placed on education in the Jewish subculture, and particularly on the male, one can better understand the Cope and Summerskill findings that Jewish males have a very low dropout rate in relation to males of other religious preferences and that to a lesser extent Jewish females have a better persistence rate than do Christian females. These differences illustrate once again the potential influence of the cultural upbringing on one's motivation and educational values. They also illustrate the possible sex differences within a particular religious orientation. Cope (1967) suggests that "those students professing a preference for the Catholic church may have attitudes, motivations, and value systems that are less conducive to success [in the college sense of academic success] than those of the Jewish faith." (p. 116).

Cope (1967) also found that males who attended religious services "once a week or more" were substantially more likely to be among the dropouts (40.6 percent) than among the stayins (26.9 percent), whereas those male students responding as attending "a few times a year" were substantially more likely to be among the stayins (20.9 percent) than the dropouts (12.5 percent). (p. 110). When Cope tested the frequency of attending religious services among females, he found very little difference between dropouts and stayins. These data suggested that those having closer ties to religious beliefs tended to be over represented among dropouts, but it should be remembered that Catholics are required to attend mass on Sunday, whereas Jews are likely to attend less frequently, so there is a confounding of these data.

Rossman and Kirk (1969) in their study of first year dropouts who left school with a grade point average about 2.0 at the University of California, Berkeley, found among females that 38 percent of the persisters

as compared to 50 percent of the withdrawers were either agnostic, atheist, had no formal religion, or no religious beliefs. Sixty-two percent of the persisters compared to 50 percent of the withdrawers belonged to organized religion. When asked what their family religious beliefs were, there was still a great difference between the persisters and the withdrawers. The persisters (74 percent) more frequently than the dropouts (63 percent) responded that their families believed in organized religion. The dropouts, on the other hand, came from families with agnostic, atheistic, or no formal religion or no religious beliefs (37 percent) more often than did the persisting students (26 percent).

Cope's (1967) study is difficult to compare to Rossman and Kirk's (1969) study as the former did not include a category of "no religious belief," which perhaps forced respondents to check the religious belief of their families regardless of the depth of their (the respondent's) conviction. Rossman and Kirk have illustrated perhaps a different type of dropout than did Cope. The latter found that dropouts attended church services more than did persisters and that, in many cases, they seemed to be more religiously oriented and dependent than stayins. Rossman and Kirk in contrast seem to be saying that those with no religious beliefs have a higher withdrawal rate. To explain this seeming contradiction one has to consider the type of dropout. Rossman and Kirk define their dropouts as those who did not return at the beginning of the third semester and who had a grade point average above 2.0. Cope included all those who did not register for courses in the fall term two and three years after original entry. In other words, Cope included all students who failed to register regardless of their academic performance in college. This coupled with Cope's not including a category of non-religious preference tends to obscure his findings. His population of dropouts would mask out the differences between students who voluntarily withdraw with a poor average and those who are flunked out. It may be that students with a poor grade point average are less intellectually oriented and more dependent on formal religion. Those with a better grade average, on the other hand, may be more intellectually oriented, may be less dependent on formal religion, and more likely to withdraw for non-academic reasons. The difference in findings points up the need once again for developing more refined typologies of students.

In conclusion, in the very limited research that has been carried out relating religion to persistence or withdrawal seems to indicate that religion is an important variable to consider, since particular religions potentially represent different styles of life and dissimilar value orientations. It is the style of life and the value orientation of a particular religion rather than the religion itself which affects a person's motivation, achievement aspirations, and educational goals. Thus one's religious preference or non-religious orientation has the potential of being a possible predictor of dropping out or persisting when considered along with other significant variables.

Socioeconomic Status: Education, Occupation, Income. Frequently employed in dropout studies, the socioeconomic variables of parents' education, occupation, and income often show a negative correlation to the attrition rate. Generally the higher the socioeconomic status of the family the higher the probability of graduating from college, and the lower the socioeconomic status the greater the probability of dropping out. It should be remembered that there is an interdependent relation between income, occupation, and education; the unifying factor which seems to tie these variables together is that of social class, or less abstractly, factors within social class such as life style and value orientation. Within families of different social classes the socialization process is often greatly different. As children develop educational values, they acquire many of the attitudes and aspirations of their parents. Also they acquire verbal and auditory skills which have an effect on their ability to adjust to and meet the demands of college. Some students from certain socioeconomic backgrounds have developed attitudes, skills, and values which may or may not help them persist in college. Some students have the necessary intellective skills and aptitudes to succeed, but their attitudes and expectations are not functional for persisting. Similarly, some students have the attitudes and values but do not have the skills to succeed in college. The latter perhaps would be those who are forced out for academic failure and the former would be those who withdraw voluntarily in good academic standing.

Parents' Education. Parents' educational level was used as a test variable in several dropout studies, and with the exception of two studies (State University of Iowa, 1959; Wood, 1963) all found a negative relationship between educational level of parents and dropping out.

Slocum (1956) in a study carried out at Washington State College on the entering class of 1951 found that the higher the educational level of the parents the higher the chances for persisting. This was true for both mother's and father's educational level when used separately. Lins and Pitt (1953) found father's educational level to be related to persistence. Ninety-three percent of the students whose fathers graduated from college persisted through the first four semesters at the University of Wisconsin, while only 66 percent of students whose fathers had not graduated from high school persisted through four semesters. Pearlman (1962) indicated that a student whose father had studied beyond the Bachelor's degree and whose mother had at least a high school education was more likely to graduate than a student whose parents had a lower educational level.

The Oklahoma State Regents for Higher Education (1964) found that freshmen whose parents were both college graduates persisted through the freshman year at 13 percent higher rate than those from families of which neither parent had a Bachelor's degree. Chase (1965) also found that dropouts came from families with a lower educational level average of parents. Likewise, Otto and Cope (1965) and Gurin, Newcomb, and Cope (1968) both found the educational level of the parents to be related to persistence in college and the lower the educational level the greater the chance of dropping out.

Astin (1964) in his study of high aptitude National Merit Scholars found that the entering college students who were most likely to drop out were those who came from relatively low socioeconomic family backgrounds. He found that four indicators of socioeconomic level (mother's education, father's education, father's occupation, and number of peers attending college) were significantly correlated to dropping out for both sexes.

Warriner, Foster, and Trites (1966) studying the entering freshman class in 1962 at the University of Oklahoma found that attrition of sons and daughters was related to whether or not their respective fathers and mothers had completed or discontinued high school or college. More specifically they reported:

> The findings of the present study support those of O'Connor and Jones with respect to the interaction of parent's completion of educational undertakings. Sons from homes characterized by incomplete education attainments of one or both parents are more likely to voluntarily withdraw

> from university training than are sons coming from homes characterized by complete educational attainments of their parents. This is also true for daughters when only the educational attainments of their fathers are considered. (p. 468).

Two studies reported no significant difference in attrition rate due to parent's education. The State University of Iowa Study (1959) found students whose parents held the Baccalaureate degree tended to persist in college more than those students whose parents did not hold the degree. Likewise, Wood (1963) in a study of a four year high standard girls college found there was no significant relationship between total years of formal education of both parents and percent graduating. A possible explanation here is that the students were of a relatively high socioeconomic background and more highly selected so that most had high academic potential when they entered.

In conclusion, studies which relate parental education to attrition generally show that the lower the educational level of the parents the greater the likelihood of dropping out, and, conversely, the higher the educational level of the parents the greater the chance of graduating and the lesser the probability of dropping out. However, it is not the educational level of parents *per se* which directly affects a student's ability to persist in college; it is rather the results that education have on parents' life style and values and, subsequently, the socialization of the child. Attitudes and behavior patterns are generally functional within the environment in which they develop; however, the functionality is not always congruent with the demands of the educational system both in terms of attitudes and behavior. The child who is brought up in a family with a low level of education will not be as functionally suited to persist in college as will the child brought up in a home environment which values education and has socialized the child to expect to go to college and to expect to do well. A child who has often been rewarded for educational achievement has a better chance to succeed in college than the child who comes from a home which fails to provide these patterns.

Parents' Occupation. Like education, father's occupation has generally been negatively related to dropping out--the higher the occupational status, the lower the dropout rate, and, conversely, the lower the occupational status, the higher the dropout rate. Occupation

is often a reflector of education and therefore to a lesser extent a reflector of general life styles and social class differences.

Summerskill and Darling (1955) found that there were more dropouts among the students whose fathers had skilled, or service occupations. In another study of a large university Suddarth (1957) reported similar findings, however, when Suddarth controlled for high school performance, the differences due to father's education disappeared. Pearlman (1962) also found the occupation of the father did not matter when high school achievement was used as a control. This suggests that those students whose fathers had skilled, semi-skilled, or service type jobs tended to do poorer in high school than those students whose fathers had professional and higher status occupations. Slocum (1956) reported:

> A significantly higher survival rate was noted for those whose fathers were employed in professional, technical, or kindred work. The highest mortality was observed among those whose fathers were employed in service occupations and as manual laborers. An interesting exception to this was that the few children of farm laborers and foremen had a very high survival rate. (p. 14).

Several other studies which were not directly related to attrition but which have indirect significance are MacLachlan and Burnett (1954), Farnsworth (1955), Gerritz (1956), Hood (1957), Mukherjee (1958), and Patton (1958). All found academically successful students tended to come from families where fathers hold upper level occupations, generally professional and managerial.

Slater (1960) found that students entering the same occupation as their father had a better chance of succeeding in college than those who majored in fields which were different than those of their fathers. They also found that students whose fathers were in small businesses and farming had the higher dropout rate. This finding may be somewhat biased as many students who are studying in college for the same occupation as their father would have fathers who also went to college. This suggests that it would not be as much a matter of striving to follow in the footsteps of the father and to have the encouragement of home as it is to grow up in a family which has traditionally valued education. The review of socioeconomic variables thus far has suggested that it is not the educational level of the occupational status as it is the life style and values which emanate from the home environment. Coming from a home environment which both supports the student's occupational choice and

promotes educational values which are congruent with success in college gives the student a much better chance of persisting than the student who receives neither the support and encouragement nor the positive educational values.

Income. While several researchers have considered family income as an independent variable in attrition studies, their findings are often inconsistent and conflicting. Some have reported a negative correlation between dropping out and family income while others have reported no significant difference due to family income. Like occupation, income is perhaps not as good a predictor of dropping out as is family education. Income, to a lesser extent than education and occupation, does not contribute as much to the explanation of family life style and family values. Families can have lower class life styles and negative values toward education and still have a relatively high income. Considering this, income would not seem as good a predictor of attrition as would education and occupation.

Iffert (1957) found the higher the income the greater the chance of graduating. He found the yearly median income for parents of non-graduating students was $437 less than that of parents whose children graduated. With the median income of parents of first registration period dropouts, the former group's median income was more than $1000 above that of the latter group.

Cliff (1962) found that dropouts when compared to stayins tended to come from lower income homes. Similarly, the Oklahoma State Regents for Higher Education (1964) found in a study of college freshmen that students from low income families had a higher dropout rate than did students from higher income families. Thistlethwaite (1963b) in a select group of National Merit Scholars found a significant positive relation between retention and the ability of parents to pay $800 or more per year towards their children's education.

Cope (1967) in his study which did not include in the category of dropouts those students who left school for financial hardship reasons found a significant negative correlation between family income and dropping out for females but no consistent significant relations for males. Cope states:

> It would appear from these data, at least for females, that there is a positive relationship between family income and staying in. Since the same strong relationship was not

> evident in the male sample it seems as though females coming from less wealthy homes may, among youth from relatively wealthy families, find themselves more "out of place" than males. (pp. 133-134).

Otto and Cope (1965) reported that girls from low income families tend to withdraw for non-academic reasons, which reinforces Cope's above statement that girls from low income families may find themselves "out of place."

Several studies found that there was no relation between dropping out and family income. The State University of Iowa (1959) study which researched the entering class of 1953 after eight semesters found no relationship between dropping out and parents' income. Gonyea (1964) and Pearlman (1962) also found no relation between persistence and family income.

In conclusion, socioeconomic variables do appear to be of significance in studying attrition and developing predictors of types of student performance. Generally socioeconomic variables are positively related to persistence in college. Educational level of parents seems to be the best predictor of persistence or withdrawal followed by occupation and then income. From the studies which have employed socioeconomic variables, diverse findings have been reported. Perhaps part of the variance can be explained by the fact that almost all studies employ different definitions of the dropout, employ divergent criteria of socioeconomic variables, and carry out their studies in different institutions and at different times utilizing dissimilar samples and research techniques.

Family Residence. Several studies have considered the idea of home residence affecting the attrition rate. They have approached the residence variable from four different positions: rural-urban; in-state--out-of-state; distance to college; and living at home and commuting to college. Summerskill (1962) in his review of literature states: "...Higher attrition rates among students from rural homes than among students from cities or towns were uncovered in three earlier studies (Cuff, 1929; Strang, 1937; West, 1928)." (p. 633).

More recently Slocum (1956) found that residence prior to entrance into Washington State College in terms of rural-urban residence had no bearing on persistence or withdrawal.

Three studies carried out at the University of Michigan's College of Literature, Science and the Arts (Otto and Cope, 1965; Cope, 1967; and

Gurin, Newcomb, and Cope, 1968) found rural-urban residence to be related to voluntary withdrawals and also found boys from small communities had a higher dropout rate than those from larger communities. Cope (1967) concludes that "among the dropouts a larger proportion came from the small communities," (p. 123) and the breaking point in community size was about 50,000 population. The dropouts more often than the stayins came from the communities under 50,000, and stayins more often than dropouts came from communities and metropolitan areas larger than 50,000. The dropout rate decreased as it approached a population level of 50,000 and increased as it neared 10,000 or less. This was true for both males and females, but the difference was greater for males. As the size of the community increased or if the community were a suburb of a metropolitan city over 200,000 population, Cope also found that a student's chances of persisting increased. Gurin, Newcomb, and Cope (1968) state that "Dropouts occur more frequently among students coming from rural, small town backgrounds and from the smaller high schools than among students without this background." (pp. 29-30).

The second approach to the residence variable, that of in-state--out-of-state family residence, has yielded conflicting findings. Wood (1963) in a study of a liberal arts girls college found that in-state students had a better chance of graduating than did out-of-state students, while Chase (1965) studying first semester dropouts at the University of Indiana, found that in-state--out-of-state was not significantly related to the dropout rate. Cope (1967) found that students of both sexes whose homes were in the Midwest (The university studied was also located in the Midwest.) had higher withdrawal rates than did students who lived outside the Midwest.

Other researchers have studied the relation of the distance between a student's home and college with dropping out. Iffert (1957) states: "The weight of evidence points to the conclusion that location of a student's home in relation to college had no bearing on his chances of graduation." (p. 74). However Holmes (1959) in a study of dropouts from Syracuse University noted that 30 percent of the dropouts were from the same county in which the university is located, whereas 20 percent of all the entrants were similarly located, suggesting that a greater number of the dropouts than would be expected lived close to the university. He also noted that 20 percent of the student body were out-of-staters

whereas only 17 percent of the out-of-staters were dropouts. Contrary to Holmes' study, Aiken (1964) in a study of the dropouts from the Womans College of the University of North Carolina found that all the dropouts in his sample lived more than 100 miles from the university. Similarly Wood (1963) reported in his study of a girls college that the farther a girl lived from Hollins College the less likely she was to graduate. He found that 63 percent of those living within 199 miles compared to 31 percent and 41 percent of those living within 500-799 miles and 800+ miles, respectively, graduated from the college. Likewise Stordahl (1967) in a study of voluntary withdrawals from Northern Michigan University reported that "voluntary withdrawals seemed to be related to location of residence, with a disproportionate share of the withdrawals coming from the Lower Peninsula and other states." (p. 4). (The university is located on the Upper Peninsula.) He also found that both men and women gave as their reasons for transferring to another college a desire to be closer to home

The final residence variable, living at home and commuting to college, was employed by Iffert (1957) who found that students residing at the college had "...a significantly better persistence record than had students who lived with parents, relatives, or friends. Again the difference was greater for men than for women." (p. 74). Iffert further stated that "Although students who lived within convenient daily traveling distance of the institutions of higher education they attended had poorer average persistence records than students who lived beyond a convenient daily traveling distance, location of home was so closely related to type of institution attended that no inference of causal relationship could be made." (p. 79).

In conclusion the literature indicates conflicting findings when residence variables are employed in attrition studies. This confusion may result from the abstractness of the variable, i.e., the distance of the variable from the realities of the withdrawal process. Within the four types of residence variables employed, the best indicator of dropping out seems to be the rural-urban residence. Underlying the rural-urban dichotomy is implied a different orientation to life and a different value structure of the people from both groups which are fostered in different family, community, and school environments. Attitudes, intellectual aptitudes and intellectual skills may be potentially different for the

two groups. This is not to say that one group has a better chance of persisting in any college, rather, that an individual brings to college attitudes, aptitudes and skills which when given a particular environment will help or hinder him depending on how well his social, psychological and intellectual needs are met by the particular institution he attends. In the case of a student from a rural background who attends a very large impersonal university, he may find that his needs are not met by the institution, and, furthermore, that the orientation of the university and the people with whom he comes into contact threaten his identity. His reaction to his situation may preclude a successful adaptation to the university. This student, if he were to attend a smaller institution where his present social and intellectual needs are met, may find that he is able to adjust quite easily and successfully. A student from an urban environment, on the other hand, attending a large university may find that his personal needs are met by the institution and that his adjustment is successful. The same student, if he were to attend a small rural college, may find that this type of institution did not fit his needs. Although he could handle the academic aspects of institution, he might feel that it did not offer enough in the way of diversity and that the type of students were not those who best complimented his social and personal orientations.

It would seem that rural-urban residence may be of use to attrition research if it is used in conjunction with the type of institution being studied. Although several researchers are now studying the relation between "institutional press" and student "fit" within the institution, (see Pace, 1963; Cope, 1967; Pervin and Rubin, 1967; Cope and Hewitt, 1969) not enough research has been done in this area. Attrition research if it is going to be meaningful and add to explanation, prediction, and theory must keep in mind the relation and interaction between what a student brings with him to an institution and the type of institution he is entering and how well the individual fits into the institution. The extent to which socioeconomic variables, religious variables and residence variables help explain what a student brings with him to a particular institution is generally the extent of the usefulness of such variables. These variables allow researchers to make implicit certain generalizations and assumptions about the population under study.

Pre-Admissions Educational Variables

Reviewed in this section will be the literature which relates pre-admissions educational variables to dropping out of college. These variables include type of high school, public or private; size of high school; achievements in high school, academic and non-academic; position in graduating class; high school grade average; and high school achievement and aptitude test scores, SAT scores and CEEB scores.

Type of High School. While one would expect studies to control for the type of high school from which students come, i.e., whether it is public, private, religious, or non-religious, only one study reviewed directly controlled for the type of high school. In his study of a private girls college, Wood (1963) found that the type of high school graduated from did not seem to play a significant role in determining who would graduate or who would have a higher grade point average. He found that 53 percent of the girls from public high schools graduated on time compared to 52 percent of the private school girls. This study should not be considered representative in that a larger percentage of the girls were from private schools.

Size of High School. When used as a variable in dropout studies, size of high school has revealed conflicting results. Thompson (1953) and Suddarth (1957) both found that students from large high schools had significantly better chances of graduating from college than did students from smaller high schools. Slocum (1956), however, found in his followup study of dropouts from three freshmen classes that there was no relationship between size of high school and either academic achievement or attrition. Similarly, Chase (1965) in a study of 75 first semester dropouts of the entering class of 1961 at Indiana University concluded no significant relation between number in graduating class and dropping out. Also Panos and Astin (1967) in a large scale study of over 30,000 students from 246 colleges and universities reported that size of high school class was not predictive of dropping out.

Cope (1968b) reviewed several studies which considered the relation of high school size to college grade point average. He could only report conflicting findings in the literature. Altman (1959) stated that high school size was unrelated to college performance. Hoyt (1959) controlled for intelligence while studying the effects of class size on achievement, and she found that graduates from smaller schools tended to have lower

grades. In a study of high ability under-achievers, Shaw and Brown (1957) concluded that these students more often came from less populated areas. Comparing the graduates of large city and suburban high schools to those of rural high schools in a study which was to determine which group was better prepared for college, the University of Chicago (Phi Delta Kappan, 1965) discovered that urban students generally entered with higher College Board exam scores and did better during the first year. The rural group was reported to have grades below average during the first year, but in subsequent years the rural group performed somewhat above average. Lins, Abell, and Hutchins (1966) studying 3700 freshmen at the University of Wisconsin found no significant relation between high school graduating class size and first semester grade point average. Cope (1968) concludes:

> Studies relating high school size to academic achievement appear to permit no easy generalization. School or community size may be closely related to such factors as: levels of socioeconomic status, differences in facilities, teacher salaries, class size, available curricula, and differences in communities. For instance, who can say that a large high school in an academic community is similar to a school of comparable size in the heart of a large city? (pp. 43-44).

High School Activities. Only two studies reviewed suggested high school activities as a test variable in attrition studies. Chase (1965) in a study of first year dropouts at the University of Indiana reported that:

> The dropout was proportionally over-represented in activities other than student government and academic clubs, and he was clearly under-represented among students who participated in all kinds of activities--government, academic clubs, and non-academic clubs. The category of government and academic clubs stood large in the analysis however, the small frequency makes its reliability doubtful. It appears that the high school spare time interest of the college freshmen dropouts centered around the non-government, non-academic organizations and they tended to be in fewer kinds of clubs than the non-dropout. (p. 9).

Panos and Astin (1967) in their large scale study indicated that only two of the eighteen secondary school achievements which were listed in their questionnaire appeared to be significant in predicting dropping out or not dropping out. They were "election to a student office" and "participation in high school plays." Students who participated in these activities were less likely to drop out and more likely to graduate.

More research in the area of participation in high school activities may yield meaningful results in adding to the prediction and understanding of dropping out, especially if such analysis is accompanied with research which controls for significant other variables.

Rank in High School Class. Several studies have considered the relation of class standing to dropping out. As with the variable, size of high school, conflicting findings have been reported. Koelsche (1956) studying the top and bottom fifths of a high school graduating class found that 25 percent of the students in the upper group contrasted to only 14 percent of the students in the lower group dropped out of college. He also found that 38 percent of the withdrawers were doing satisfactory work when they dropped out. Munger (1957) reported that the students in the upper third of their high school class had a better chance of graduating than those in the lower two-thirds. Gonyea (1964) studying freshmen at the University of Texas discovered that rank in high school class was the most significant of the biographical variables he studied; the lower the class rank the better the chances of dropping out. Iffert (1957) also found a positive relation between standing in high school class and persistence in college. Wood (1963) in a study of a private college observed that rank in high school class did not relate significantly to attrition. Chase (1965) in his University of Indiana freshmen study said that "...the dropouts were proportionately under-represented in the upper 10 percent of the high school class, where about 14 percent of the dropouts appeared in contrast to 32 percent of the non-dropout group." (p. 8).

Irvine (1966) attempted to determine which pre-admissions variables were the best predictors of graduating from college. From the study of 659 males who entered the University of Georgia in 1959 he specified that the best predictors of graduating in order of importance were high school grade average, SAT-math score, and position in high school graduating class. Utilizing these three variables, prediction of graduation was only at the .38 level of correlation; the correlation could be increased to .48 when the first quarter college grade point average was added. Irvine concluded his study by suggesting "improved predictions of graduation might depend upon the tapping of non-intellective factors not included in this study." (p. 88). Furthermore he suggested that different variables might be utilized to predict

graduation at different institutions and that these variables might be different for males and females.

High School Grade Average. Researchers who have employed high school grade average as a predictor of dropping out or persisting generally agree that there is a constant relation between performance in high school and dropping out of college.

Slocum (1956) reported that persistence was positively related to high school grades. The average percentile high school rank was 73 for the persisters compared to 58 for the dropouts. (At the time of the study Washington State College did not have very high entrance standards.) The University of Wisconsin (reported in Knoell, 1966) found that the median high school grade was 80 for the persisters and 64 for the withdrawals. Similarly, the University of Iowa (1959) reported that the mean high school grade point average was 2.53 for the dropouts and 2.91 for the persisters. Generally they all found the lower the high school grade average the lower the chance of persisting. Gadzella and Bentall (1967), studying the 1961 graduates from Portland, Oregon, high schools who went on to college in the region postulated that the only measure that differentiated the graduates from the dropouts was the higher high school grades of the graduates. This finding was true for both males and females.

Summerskill (1962) in his review of the literature cited 11 studies which dealt with high school grades and dropping out. All but one of these concluded that college dropouts had lower average grades than did persisters. Summerskill suggested that it is difficult to describe the extent of the relation since the studies he reviewed were so variable in terms of schools, students, grading systems, and methods of statistical analysis.

Irvine (1966) in the University of Georgia study (previously cited) found that the best single predictor of persisting was high school grade average. It correlated .34 with graduation from college. This study considered all subjects who had not graduated in five years after their initial enrollment in 1959 as non-graduates and those who had graduated within this time span as graduates. These broad definitions preclude the finding of a more significant correlation. It might be expected that this type of prediction would be increased if categories which differentiate among types of dropouts and among types of persisters were developed.

Panos and Astin (1967) in their large scale study of 246 colleges and universities with a sample of over 36,000 students found high school grade average was predictive of completing four or more years of college. Again the central problem exists of having an unrefined and all encompassing operational definition of dropouts. Panos and Astin defined the dropout as those students who left the institution they entered and had not, after four years, completed four or more years of college.

The greatest shortcoming of the literature reviewed on this topic is its failure to differentiate between types of dropouts. Generally researchers have included all students who do not return at or within a given time or students who do not graduate in four years as dropouts.

One study which did differentiate between "voluntary withdrawals" (those who left college voluntarily with a good grade point average) and "forced withdrawals" (those who are forced out of the university by the administration for academic failure) found that high school record did not differentiate between "persisters" and "voluntary withdrawals." But it did differentiate between "forced withdrawals" and "persisters" and also between "forced withdrawals" and "voluntary withdrawals" (California State College Studies reported in Knoell, 1966). These findings suggest that had many of the studies cited in this review controlled for the type of dropout the findings may have been considerably more reliable and of much greater predictive use. By grouping all students who leave college before graduation into one category of dropouts many of the more subtle differences which exist among dropouts are masked out. For example, had the studies in this section controlled for the type of dropout, their findings would perhaps show as the California study did that high school average is a very relevant variable to consider when studying forced withdrawals but perhaps irrelevant when studying voluntary withdrawals.

High School Aptitude Tests. Several forms of high school aptitude test scores have been given considerable attention in attrition research. The most common are the College Entrance Examination Board's SAT-math and SAT-verbal tests, School and College Abilities Test (SCAT), and the American College Testing Program (ACT) as well as other less well known instruments. The general finding of studies employing aptitude test scores is that dropouts usually have a lower average aptitude test score than do students who persist.

In a college where admissions standards were low, Slocum (1956) found that aptitude test scores were significantly related to attrition. For example, on the American Council on Education Psychological Tests (ACE) he discovered that the median score for enrolled students was 56 compared to 42 for dropouts. Lins and Pitt (1953) in a study at the University of Wisconsin and The State University of Iowa Study (1959) both reported that withdrawing students had a lower mean achievement test score than did persisting or graduating students. Iffert (1957) found that graduates were more likely to come from the top two-fifths of the ability level, and dropouts were more represented in the lower ability levels.

Summerskill (1962) reviewed nineteen attrition studies which employed scholastic aptitude; sixteen of these reported that scholastic aptitude was lower for dropouts than for graduates. Wood (1963) in his study of a private girls college found that math and verbal SAT scores showed an overall significant relation to attrition, with dropouts having lower scores than graduates. The Oklahoma State Regents for Higher Education (1964) found that students who scored in the top quartile of the ACT aptitude test persisted at the rate of 77 percent compared to 50 percent persistence for those in the lowest quartile. In a study of the University of Indiana, Chase (1959) found considerable overlap in SAT scores between dropouts and non-dropouts while there was a mean difference of 109 points for total sum of SAT scores between the two groups. The dropouts had the lower average SAT scores. Medsker and Trent (1965) found a positive relation between ability level and persistence.

Ivey, Peterson, and Trebbe (1966) using high school rank (HSR), SAT scores, and the Personality Record (PR) to determine if attrition could be better predicted found that "...high school rank is the most effective predictor of collegiate success and the CEEB-SAT provides a significant addition to HSR as a predictor." (p. 202). This study found that the multiple point-biserial correlation of the three above variables to attrition was .539. This study like most of the above studies grouped all withdrawing students regardless of their academic standing at the time of withdrawal into one group and defined them as "dropouts." It is no wonder that researchers are unable to better predict which student will graduate and which will drop out.

Utilizing several pre-admissions educational variables, Irvine (1966) in a study of males at the University of Georgia stated that SAT-math score was the second best predictor of graduating; the best predictor was high school grade average. Daniel (1967) in a study carried out a year and a half after freshmen entered the University of Alabama stated that students who left school in good standing had higher SCAT verbal scores than students who dropped out in poor standing. Cope (1967) found that SAT scores were related to dropping out for both males and females; however, the females with the lower verbal scores had a higher dropout rate than did males with similar verbal scores.

A few other studies employed reading ability tests in their studies. Hanks (1954), Pattishall and Banghart (1957), Gehoski and Schwartz (1961), and Gonyea (1964) all found that dropouts have a lower reading level than do stayins. Johnson (1954) illustrated that women who persisted had better reading abilities than women who dropped out. Gonyea (1964) in his study at the University of Texas found that those who dropped out of the university permanently had lower scores in numerical aptitude, spelling, English grammar, and reading comprehension. Greenfield (1964) found that engineering students who withdrew had a lower numerical aptitude and a lower trigonometry achievement score than did the engineering students who persisted.

In conclusion, these studies all have a common fault; they do not differentiate between the type of dropout and the type of stayin. They group all dropouts together and use their mean or median aptitude test score to compare with the scores of the persisters. Within this type of study, potential differences that might exist among types of dropouts or types of stayins are lost in the all-encompassing operational definition, resulting in the masking out of important differences which might be of value in predicting which type of student has a greater probability of dropping out. As would be expected, studies which attempted to develop predictive indicators of dropping out by utilizing aptitude test scores and other variables have unwisely concluded that most variables are not very good predictors. Rather, it should be concluded that gross definitions of dropouts in attrition research seldom yield significant results.

One study which did differentiate between types of dropouts has illustrated the potential of designing studies which allow for more than

one type of dropout. Rossman and Kirk (1969) in their study at the University of California at Berkeley defined two types of dropouts and one type of stayin. Dropouts included "voluntary withdrawals" (those students who did not return in the fall of their sophomore year and who had a grade point average of 2.0 and above) and "failures" (those students who did not return in the fall of their sophomore year and whose point average was below 2.0). The group who returned in the fall of their sophomore year and who had a point average of 2.0 and above were called "persisters." By developing these two types of dropouts, they found that "voluntary withdrawals" actually had significantly higher SCAT-verbal scores than did the "persisters." The "failures," on the other hand, had lower SCAT-verbal scores than either of the two other groups. This study once again points out the usefulness of refining the operational definitions of dropouts.

Educational Expectations and Vocational Choice. Several studies have attempted to determine if there is any relation between a student's educational goals and his persistence or withdrawal. The State University of Iowa Study (1959) found a strong positive relation between persistence and the number of years of higher education planned. In a study of National Merit Scholars, Thistlethwaite (1963) revealed that those students who made any early decision to go on to graduate or professional school had a better chance of graduating than those who were not contemplating graduate training. Chase (1965), however, did not find a significant difference between dropouts and non-dropouts in their plans for graduate study after one semester of college at the University of Indiana. His dropouts included all freshmen who left the university before the end of the semester. He did not state if there was a difference below the .02 level of significance. Otto and Cope (1965) reported that girls who have high educational expectations and want to go on to graduate school tend to withdraw less than those who have low educational aspirations.

One study which classified students into four categories according to degree of certainty about vocational and educational goals which they had stated at the time of admissions and also according to high or low GPA after the first year discovered that those students who had a GPA below 2.0 at the end of the freshman year and who were certain of their educational and vocational goals dropped out at a rate of 75 percent of

that group, compared to an overall dropout rate of 37 percent. This finding suggests that a student who has high educational expectations and who fails to achieve the means to the end, i.e., the grades necessary for graduate school or the profession may find it necessary to drop out or transfer to another institution.

Panos and Astin (1967) found that dropouts at the time of entrance to college were less likely to plan to continue on to professional school. Rossman and Kirk (1969) reported that 23 percent of the withdrawals and 8 percent of the persisters planned at the time of entrance to the University of California, Berkeley, to transfer or leave before graduating. Ninety-two percent of the persisters and 77 percent of the withdrawals planned to graduate from Berkeley. These findings generally suggest that one's educational expectations at the time of entering college may be an important variable to consider when attempting to develop predictors of academic performance. Perhaps researchers should not attempt to go through the back door when studying abstractly related motivational variables. Why not ask entering students what their educational expectations are?

Extracurricular Activities. Several researchers have attempted to find if there is any relation between dropping out of college and participation in non-academic activities in college. The studies reviewed all found that dropouts participated less in extracurricular activities than did stayins. (McNelly, 1938; Mercer, 1941; Slocum, 1956; and Vaughan, 1968). Likewise Slocum (1956) and Iffert (1957) both found that fraternity and sorority members had better persistence and lower withdrawal rates than did non-members. Koelsche (1956) reported that the majority of the dropouts from the University of Indiana had participated in many high school extracurricular activities but did not take part in many outside activities once in college.

Participation in extracurricular activities can be seen as an integrating experience which to some students may bring more meaning and purpose to their matriculation in college. Being involved in non-academic activities may be a factor in dissuading students who might potentially drop out. Also, participation may be a stimulus for students to achieve well academically. In short, students who participate in extracurricular activities perhaps experience fewer incongruent situations in which their personality and social needs are not met than non-participating students.

More about this will be discussed in a subsequent section on environmental presses and fit.

College Major. The relation of a student's major to dropping out or remaining in college has been the concern of several researchers. Chase (1965) did not find a significant relation between the major a student chose and persisting or dropping out at the University of Indiana. Medsker and Trent (1965) in their study of high school graduates who went on to different types of colleges reported:

> Persistence was also found to be related to the major declared by the students at the point of college entrance. It was found that the highest first year attrition group (25 percent) were the declared terminal students, most of whom were in public two year institutions. Next in rank (22 percent) was the group with the business major. Those with declared majors in the natural sciences showed the greatest tendency to remain in college, with only 9 percent failing to complete the first year. (p. 97).

Reed (1968) at Skidmore College found that liberal arts students dropped out at twice the rate as students in professional fields. The Bureau of University Research, Northern Illinois University (1967) reported that the College of Education had the highest graduating rate with 38 percent graduating after four years, followed by the College of Liberal Arts and Science (26 percent), College of Fine and Applied Arts (21 percent), and College of Business (20 percent). Fleisch and Carson (1968) in a study of the class of 1970 at Boston University found that after two semesters that the College of Basic Studies (a two year program) had the highest dropout rate followed by the College of Engineering and the School of Fine and Applied Arts. The Colleges that Fleisch reported to have the lowest dropout rate were the Schools of Physical Education (Sargent College) and Education.

These findings are too diverse to conclude that college major is related to persistence. Perhaps what college major does suggest is there are different personality types of students who choose one major over another and also that one particular major department or school of a university may or may not fit the social, personality, and intellectual needs of various students.

Psychological Variables

The findings of several studies show that some psychological variables are related to college attrition. However, the findings are not always

consistent since the studies reviewed often differed in their operational definition of dropouts, in research design and analysis, in sampling methods, and in type of psychological variables studied. Some of the studies utilized standardized psychological inventories, such as MMPI (Minnesota Multiphasic Personality Inventory), CPI (California Psychological Inventory), OPI (Omnibus Personality Inventory), while others developed their own psychological scales or utilized less well known tests.

Grace (1957) in a study using the MMPI found that dropouts tended to be more dependent, irresponsible, and anxious than persisting students. Summerskill (1962) reported that Plaubinskas (1952) did not find significant differences between persisters and dropouts using the MMPI.

Using the CPI at the University of Texas, Gonyea (1964) revealed that persisters scored higher than permanent dropouts on scales of socialization and responsibility and also scored higher than temporary dropouts on scales of responsibility. Astin (1964) using CPI found that dropouts tended to be more aloof, self-centered, impulsive, and assertive than non-dropouts. This study was conducted on a national sample of high aptitude students.

Four studies employed the OPI in attrition studies. Studying thirteen liberal arts colleges throughout the U.S., Hannah (1967) found significant differences between persisters and dropouts on several of the OPI scales. He reported that leavers had higher scores than persisters on the scales of autonomy, estheticism, impulsive expression, complexity, and anxiety level with lower scores on scales of theoretical orientation, personal integration, altruism, and religious orientation. These were the general findings of all thirteen colleges grouped together. The colleges represented a range from religiously conservative to very liberal in structure and student body make-up.

Rossman and Kirk (1969) controlling for sex compared persisters (students who returned to Berkeley for their sophomore year with a GPA of 2.0 or better) with voluntary withdrawals (those who failed to return for their sophomore year but who had a GPA of 2.0 or better) on the fifteen OPI scales. They found male voluntary withdrawals scored significantly higher than male persisters on scales of thinking introversion,*

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*Significant at .05 level of confidence.

estheticism,* complexity,** and impulse expression* and significantly lower on scales of practical outlook,* femininity,* and intellectual disposition.* Female withdrawals scored higher than female persisters on scales of thinking introversion,*** estheticism,*** autonomy,*** and impulse expression* and lower on practical outlook,*** and intellectual disposition.***

Medsker and Trent (1965) also using the OPI reported that "The overall profile differences between the two groups (students who persisted through the first year and students who did not)[/] were statistically different beyond the one percent level for both sexes, however, when tested separately, the measures of Complexity and Social Maturity did not differentiate between the dropouts and persisters." (p. 96). Dropouts scored lower than persisters on scales of thinking introversion and complexity and higher on the scale of anxiety level. Rose and Elton (1966) using the 1963 freshman class of the University of Kentucky found significant differences after one year of study between and among two types of persisters and two types of dropouts on several of the OPI scales. They differentiated between those students who left in the middle of the semester, "defaulters," and those who left after completing two semesters with a C or better average, "dropouts." Persisting students were divided into two groups: "successful persisters," those who returned for the third semester with C or better average; and "probation persisters," those who returned for the third semester with an average below C. Their findings cannot be compared directly as they developed scales from the OPI which differed slightly from the traditional scales. However, their findings did point out the relevance of differentiating among types of dropouts and types of persisters. They state:

> Students who are in good academic standing and voluntarily do not return to college (dropouts) are clearly different in their personality structure from students who withdraw within the semester (defaulters). Students who

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*Significant at .05 level of confidence.

**Significant at .01 level of confidence.

***Significant at .001 level of confidence.

[/]Parentheses are Skaling's.

> persist in college and earn a C average exhibit a different personality organization from students who continue but earn less than a C average. Withdrawing students can be distinguished in their personality traits from persisting students. Thus, personality characteristics significantly differentiate between types of persistence (above or below C); between withdrawing and persisting students. (p. 244).

Cope (1968c) reported that among the best OPI scales for differentiating dropouts from persisting students in a study carried out in a large midwestern university was religious orientation. His male dropouts scored higher than male persisters on the religious orientation scale, and female dropouts scored lower than female persisters on scales of theoretical orientation and estheticism.

Other studies have utilized a variety of other psychological tests. Brown (1960) indicated that male dropouts differed psychologically from female dropouts with the latter scoring higher on the Minnesota Counseling Inventory in characteristics of withdrawal and depression, introversion, and social isolation and the former scoring higher on need for heterosexuality and the need for change. A study by Heilbrun (1965) controlling for sex and three ability levels on the entering class of 1961 at the University of Iowa reported that:

> ...personality makes an important systematic contribution to college attrition for high-ability students only; for such students, passivity and task-orientated behaviors allow for a conformance with institutional values and decrease the probability of early discontinuance of their college attendance. Conversely, high-ability students of a more assertive, less task-orientated nature encounter greater difficulty in value conformance and are more likely to drop out of college prior to the second year. (p. 4).

Beahan (1966) found dropouts from the University of Buffalo were more likely to have experienced alternating moods of gloom and cheerfulness than were persisters. Otto and Cope (1965) reported persisting students place higher values on esthetics and a philosophy of life than voluntary withdrawals. They also found that politically conservative students tended to withdraw faster than politically liberal students. Otto and Cope warn that this finding should apply only to campuses which are liberally oriented.

The Center for Research and Development in Higher Education, Berkeley (1967) reported a study carried out in a highly selective science and engineering institution. It was found that 59 percent of the students

with psychological profiles similar to those of creative people dropped out before graduating while only 29 percent of those with profiles unlike creative people dropped out.

In conclusion, the use of personality inventories and psychological scales seems potentially valuable in studying attrition. Research to date has shown substantial differences between dropouts and persisters, and, in two instances, between types of dropouts and types of persisters. While the findings have not always been consistent, they nevertheless illustrate the potential use in considering psychological differences. The inconsistencies may be the result of different populations, different institutions, different definitions of dropouts, different research designs and inventories and different statistical analyses. Again it should be re-emphasized that dropouts should no longer be considered a single group. To continue this practice at this point in attrition research would be a very serious oversight.

Institutional Environmental Variables

Many of the studies reviewed thus far have neglected to consider the potential effects of institutional environment on the dropout process. However, there is a growing body of research which is beginning to study the effects of the environment on an individual's adjustment to college. The theoretical orientation underlying much of this current research interest is described in several ways by different researchers. These different interpretations are, in their present rather loose state, very similar to one another. Williams (1967) describes the effects of the environment on the individual in terms of reinforcement. He states: "...a student is more likely to leave college when behavior reinforced by his college environment is incompatible with behavior previously reinforced." (p. 880). He further stated that forms of reinforcement should be identified and suggests that if interpersonal relationships are one of the bases of reinforcement for students then "that behavior congruent with the attitudes and values of these reinforcing persons is perceived by students as eliciting positive reinforcement; behavior incongruent with such attitudes and values, nonreinforcing responses or negative reinforcement." (p. 880). Students who find an incongruent relationship between themselves and their environment and who therefore do not receive the perceived reinforcements are then more likely to be among the dropouts.

Pervin and Rubin (1967) have viewed the dropout phenomena in terms of perceptual incongruence. Finding that potential non-academic dropouts were likely to experience perceptual incongruence between their perception of themselves and their college (Princeton), between themselves and other students, and between their college and their perception of the ideal college. Their findings further suggest that perceptual incongruence is more related to dropping out for non-academic reasons than for dropping out for academic reasons. This study along with several others illustrates the function of differentiating between those students who voluntarily withdraw from college and those who are flunked out.

Cope and Hewitt (1969) reviewed literature dealing with the 'fit' between "personal needs" and "environmental presses." This approach seems to be broader and more inclusive than the reinforcement approach of Williams (1967) or the perceptual incongruence approach of Pervin and Rubin (1967). Cope and Hewitt state:

> Murray's (1938) dual concept of personal needs and environmental press seems to have provided a starting point for most of the studies of college environments. Individuals are seen as having characteristic needs and the strength and relationships of these needs were what characterized the personality. In corollary fashion, the environment is seen as having potentials for satisfying or frustrating these needs. These potentials (satisfying and/or frustrating) were called environmental presses.
>
> Stern, Stein, and Bloom (1956) were among the first to elaborate on Murray's concept by showing in studies at the University of Chicago that the prediction of academic performance was improved as the environmental presses (psychological demands) were defined. For example, students with high needs for order would experience greater satisfaction and thus perform well in an orderly-structed environment, but would experience frustration and anxiety in a disorderly environment and thus perform poorly. (pp. 1-2).

Cope (1969a) studied dropouts from a large midwestern state university. He used the theoretical orientation suggested by Murray (1938) above. Personal needs and environmental presses must be congruent. When there is a discrepancy between personal needs and the ability of the environment to satisfy those needs a student is more likely to drop out than a student who experiences a congruent relationship between his needs and environmental presses. Cope (1969) found evidence that "salient environmental characteristics of the institution (large,

liberal, affluent, secular, academically competitive, and cosmopolitan) were related to attrition, and that the relationship differed according to the sex of the student. ...because of a lack of 'fit' between the needs, interest and abilities of the students and the demands, rewards and constraints of this particular institutional setting, certain students dropped out, furthermore, student dropout behavior was found to be sex-related." (pp. ii, 3).

Cope and Hewitt (1969) and Cope (1969b) took Cope's (1969a) research one step further and reanalyzed the data. They concluded that a typology of student dropouts could be developed by analyzing the reasons given for dropping out. Cope and Hewitt (1969) also pointed out that "...in the perception of students, broad presses can be differentiated one from another, and one or more of these broad presses can be a focal point of a student's discomfort, resulting in withdrawal from the environment." (p. 4). These data are presented again in Chapter 5 of this report.

This study applied some control to those students who were classified as dropouts. They omitted from the sample all those students who left school because of circumstances which were beyond their control, e.g., health, marriage, draft, etc. The remaining group of dropouts were those who seemed to be lacking in some form of "fit" with the college. Response patterns of dropouts suggested that the major types of dropouts could be identified: "social," "academic," "family," "religious," "too intellectual," and "others." A social type of dropout was one who experienced an incongruent relation between his personal social needs and the social environmental presses at the university. The academic dropout was one who experienced lack of fit between his intellectual needs and skills and the demands of the institution. The family type left because of family crisis. The religious type experienced an incongruency between his traditional religious values and beliefs and those fostered in a liberal secular environment. This new environment created conflicting situations in which his traditional religious values and needs were in question. Faced with this situation, a student may drop out either to avoid the conflict or to resolve it. The too intellectual type found an incongruent relation between his high intellectual needs and lower intellectual atmosphere of his environment. He could do the academic work but could not take the petty and sometimes monotonous and meaningless demands of his courses. The category of others is yet undefined. Cope

and Hewitt's study has suggested that there may be a type of dropout related to the Greek fraternity system and another type related to disciplinary problems, but neither group seems large enough for further study.

Astin (1964) attempted to find what institutional characteristics when added to the individual input variables helped in increasing the prediction of dropping out. He states:

> An analysis of 15 college characteristics was performed using 38 input variables as control data. No significant college effects on the male student's tendency to drop out of college were found. The female student's chances of dropping out are increased if she attends a college with a relatively high proportion of men in the student body. (p. 219).

Perhaps one of the reasons why this research did not show more significant results in favor of environmental influences is that Astin operationally grouped all dropouts into one heterogeneous category, thus masking out many of the potentially significant differences between types of dropouts. He defined the dropout as any student who after four years from date of entry into college had not completed undergraduate training and was not currently enrolled in college. This very gross definition of dropouts limited the possibility of significant findings.

Panos and Astin (1968), using a large national sample of students from 246 colleges and universities, performed an analysis of the personal and environmental factors associated with dropping out of college. In relation to environmental factors they report that "...21 of the 36 college variables were significantly ($p < .05$) associated with the dropout criterion, independently of those student characteristics that were assessed at the time of matriculation." (p. 66).

The measures of the college environment indicated that "...students were more likely to complete four years if they attend a college where student peer relationships were characterized by Cohesiveness, Cooperativeness, and Independence. Students were more likely to drop out, on the other hand, if they attend colleges where there was relatively frequent Informal Dating among the students." (p. 66).

Some of their other findings suggested that students in colleges where there was frequent use of automobiles were more likely to drop out than in colleges where they were less frequently used. Dropping out was less likely in colleges where students frequently participated in musical

and artistic activities, where they used the library facilities often and where there was frequent conflict with the school regulations. Relative to the classroom environment, Panos and Astin found that dropping out was less likely where there was a "...high level of personal involvement on the part of the instructors and students, and where there is a high degree of familiarity with the instructor. Students are more likely to drop out if there is a relatively high rate of cheating in their college classes and if the grading practices are relatively severe." (pp. 66-67).

Relative to the administrative environment a positive relationship found between the "Severity of Administrative Policies Against Student Aggression" and dropping out and a negative relationship between dropping out and the "Severity of Administrative Policies Against Drinking and Against Cheating."

In discussing their findings, Panos and Astin suggest that

> ...at least two conceptually distinct, though perhaps related, patterns of environmental effects increase the students chances of dropping out of college. The first pattern is concerned primarily with interpersonal relationships: a high level of student competitiveness and risk-taking, a good deal of informal dating, and limited opportunities for involvement with the college through familiarity with the instructors and other extracurricular activities that tend to bring the students and college together.
>
> The second pattern of environmental variables affecting attrition appears to involve influences that are administratively determined. In college environments with high rates of student attrition we find relatively severe grading practices, a faculty that is not concerned with the individual student, and considerable freedom granted the students in their selection of courses. Although the administrative policies concerning student drinking and student cheating are relatively permissive, the policy concerning student aggression is relatively severe. On the basis of this pattern one can speculate that those colleges that foster dropping out provide little or no structure for the individual student and show a relative lack of concern for his progress or conduct, except when his conduct directly threatens the operations of the institution (that is, aggression).

Panos and Astin concluded that from this research, "The results of the multiple regression analysis document once again our inability to predict accurately whether or not a given student will drop out of college." (p. 69). Three explanations were given for this conclusion.

First, the research failed to include important input variables, i.e. academic ability on entrance to college; secondly the operational definition of dropout was too heterogeneous; and finally, the analysis did not provide for possible interaction effects among the variables.

It is the belief of this writer that the second fault, that of unrefined operational definition of dropout, is the most significant shortcoming of this, and most other dropout research.

Greatest gains in understanding and in increasing our ability to predict who will drop out will occur only when researchers begin to admit that there are perhaps several types of dropouts or several ways of classifying dropouts. A few attempts have been made to differentiate among dropouts. (Rose and Elton, 1966; University of California studies reported by Knoell, 1966; Rossman and Kirk, 1969; and Cope and Hewitt, 1969; Cope, 1969b; and Skaling, 1969.)

In research which is presently underway, Skaling (1969) has classified students from the University of Massachusetts into twenty mutually exclusive categories, twelve of which are types of dropouts. The other eight are control groups of stayins. The selection criteria of these categories are sex, academic potential at time of entrance to college, and type of adjustment to college, i.e., academic failure; voluntary withdrawal with below a 2.0 average; voluntary withdrawal with a 2.0 or higher average; persisting with a 2.0 or higher average; and persisting with below a 2.0 grade point average. These twenty types will be compared on several biographical, educational, social and psychological variables in an attempt to determine which variables are most relevant in predicting what type of student is likely to drop out of college.

In conclusion, if the diverse and often conflicting research findings of attrition studies have shown little else, they have vividly illustrated the complexity of dropping out of college. Students drop out for many reasons: some are forced out because they could not succeed in fulfilling the formal demands of the institution; some leave for lack of interest and/or loss of value for their educational arrangement; others leave because they experience personally threatening situations; some leave because the institution has not lived up to their expectations; and still others leave because of personal circumstances which make it impossible to remain in college. The reasons could go on, but the main

point is that dropping out is a complex process. Researchers must begin to admit of the complexity of it. As has been illustrated many times in this review, attrition research can no longer afford to group dropouts into one category and then attempt to correlate it to other independent variables and come up with significant predictors of who will drop out. Nor can researchers afford to study only one or two variables at a time and hope to increase the prediction of who will leave. Census type studies which count the numbers leaving are at this time of little relevance except on the institutional level. The literature has documented time and again the variable rates of withdrawal at different institutions. We know that the overall attrition rate is high, but we know little about why it is high or how to lower the rate.

Aside from the methodological problems which exist in many of the studies, the theory underlying the dropout phenomena is indeed at a primitive level. Perhaps the area of theory which will have the most relevance in increasing our understanding will be that touched on in this study, which is that of personal environment fit. And perhaps the most important research techniques which will lend new understanding as well as increased predictive power will be that research which attempts to develop categories or typologies of college student dropouts which simultaneously study the effects of several biographical, educational, psychological, and environmental variables. It is hoped that efforts in this direction will eventually yield significant results in predicting who will drop out of college, in understanding why students drop out, and in developing programs which will effectively treat the potential problem.

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NOTE: Over the past four years Stanely Cra[illegible] and Richard Stevic have been writing annual reviews on the li[illegible]e related to dropouts from college in the fall and sometimes [illegible]nter issues of College Board Review.

CHAPTER THREE

THE NATURE OF TYPOLOGIES

Michael M. Skaling

The concept typology has a history of many different theoretical and methodological uses in the social sciences. The common element among all typologies is that "...they involve a 'reduction' of what Lazarfeld and Barton have called a 'property space'."[1] That is, a typology attempts to specify complex phenomena in a more meaningful and efficient way. The dissimilarities among typologies are related to the method used to reduce the property space of phenomena and the degree to which the typology approaches a well formulated scientific theory.[2]

Pointing out the many uses of typologies, Rudner states:

> Of all the terms descriptive of formulations in the social sciences, 'typology' is perhaps the most frequently used. It has been employed to refer not only to the various kinds of nontheoretical formulations already described, but also to a great many others, ranging from vague formulations containing so-called "polar" concepts (whose meaning or application may have been indicated in only the most casual fashion) through more elaborate formulations of groups of concepts systematically connected by a few accompanying analytic sentences, and finally, to quite sophisticated systems of comparative ordering and measurement. These last mentioned systems may occasionally achieve the status of theoretical formulations by incorporating empirically testable statements.[3]

As theoretic formulations, they may be a part of a larger well developed theory which can explain, predict, and postdict a given social phenomenon. This use seldom, if ever, occurs in social science research.

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[1]Hubert M. Blalock, Jr., Theory Construction: From Verbal to Mathematical Formulations, Englewood Cliffs, N.J.: Prentice-Hall, 1969, p. 3.

[2]For a broader evaluation of the typology from the philosophy of science point of view see: Richard S. Rudner, Philosophy of Social Science, Englewood Cliffs, N.J.: Prentice-Hall, 1966; and John C. McKinney, Constructive Typology and Social Theory, New York: Appleton-Century-Crofts, 1966.

[3]Richard S. Rudner, Philosophy of Social Science, Englewood Cliffs, N.J.: Prentice-Hall, 1966, p. 35.

Typologies are more typically used in the context of discovery rather than the context of justification or verfication. As used in social science research, typologies serve as heuristic devices which help to conceptualize the subject matter under study and thus aid in the development of a hypothesis which can be put to scientific test. When typologies become so explicitly refined and verified (through the tests of hypotheses which are formulated from the typology), they become indistinguishable from explanatory concepts and theories.[1]

In relation to student life in general and dropouts in particular, typologies have been used mainly in the context of discovery rather than in the context of justification. The relatively primitive level of theoretical development concerning college dropouts has made typologies an increasingly necessary methodological device as they allow researchers to begin formulation of theory sketches of college student behavior. In the early stages of scientific development a discipline can often utilize typologies in attempts to classify data, formulate concepts, point out insignificant relationships between and among variables, and test hypotheses which help in evaluating and formulating theories.

The typological procedure utilized most often by sociologists and educational researchers is described by McKinney as the "Constructive Typology." He states:

> Constructive typology may be identified with methodology in that it is a way of handling and ordering the data of any substantive field. On the basis of the more fruitful instances of typological procedure in research, it would seem that a constructed type is a purposive, planned selection, abstraction, combination, and accentuation of a set of criteria that have empirical referents and that serve as a basis for comparison of empirical cases.
>
> The definition above indicated that the constructed type is a concept that is determined to a great degree by the selective and the creative activity of the scientists. The primary distinction between it and other concepts, however, is that its value as a component of knowledge is not to be measured by the accuracy of its correspondence to perceptual reality but in terms of its capacity to explain. The constructed type has the scientific function

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[1] Carl G. Hempel, "Typological Methods in the Social Sciences," in Maurice Natanson, Philosophy of the Social Sciences: A Reader, New York: Random House, Inc., 1963, p. 230.

> of "ordering" the concrete data so that the experience obtained from one case, despite its uniqueness, may be made to reveal with some degree of probability what may be expected from others.
>
> The constructed type is therefore a heuristic device. It is an abstraction designed to eliminate the research minutiae and to achieve a structured order of observations that more readily lend themselves to statements of verification.[1]

In the examination of the use of typologies in college dropout research, it must be remembered that there are several levels of the use of the typology. At one level is the classification technique in which the subject matters are classified on the basis of specific characteristics. This classification, said to be natural classification of its subject matter, is determined on the basis of its variables which "allows the discovery of many more, and more important, resemblances than those originally recognized." [A classification is artificial]... "when we cannot do more with it than we first intended." [The purpose of scientific classification as Kaplan has pointed out is to]..."facilitate the fulfillment of any purpose whatever to disclose the relationships that must be taken into account no matter what."[2]

The artificial classification level of a typology might be a simple classification of students into two groups of dropouts and stayins. This artificial classification has often been used by college administrators to count the number of students dropping out as opposed to those staying in. Its use is extremely limited because these large groupings generally fail to show consistent significant relations between the dropout concept and other variables under study such as SAT scores, social class, high school grades, etc. To group all students into dropouts and non-dropouts is an artificial classification and will serve only limited use.

If the classification of dropouts and non-dropouts were a natural classification, research findings should discover more significant relations with other variables. To classify all people who leave college

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[1] John C. McKinney, "Methodology, Procedures, and Techniques in Sociology" in Howard Becker and Alvin Boskoff, Modern Sociological Theory in Continuity and Change, New York: Holt, Rinehart and Winston, 1957, p. 225.

[2] Abraham Kaplan, The Conduct of Inquiry, San Francisco: Chandler Publishing Co., 1954, pp. 50-51.

prior to their expected completion date as dropouts is unnatural because the concept of dropout is multidimensional. The concepts of dropouts and non-dropouts, while they are multidimensional in their broadest definition, may be capable of a more natural classification in the form of types of dropouts. Rather than assign all students to dropout and non-dropout polar classes attempts to develop typologies of dropouts along a more natural classification line may prove useful.

Classifications are said to approach natural classification only after subjection to tests and retests and only after the classification has proved useful in relating the classification variables in a logical and empirical way to other variables. The testing hypothesis developed from the classification and its ultimate link to a broader theory will, in the end, answer the question of whether the classification is natural or artificial, and, if natural, what purpose it serves in explanation.

The initial step in developing classifications or typologies is a creative, intuitive, and at times a logical procedure. If research proves the classification to be natural, then, on the basis of several variables utilized to develop the classification, it would be possible to predict certain other forms of behavior given the initial information that would classify them as one type or another. If, indeed, the classification proves to be natural, then it can serve as a basis from which to explain more than just the dropout behavior. It may eventually be logically and empirically linked with theories of motivation, theories of college-individual fit, and theories of college peer group subcultures.

The original classification must be subjected to empirical test to determine if it does explain anything beyond the initial classification. After hypotheses have been tested, some of the classification variables may be replaced by variables which are found to be better indicators of types of individuals.

Typologies which attempt natural classification of student dropouts have been developed in two different ways. One method is that employed in this investigation: a factor analysis of data on dropouts. In this type of analysis certain factors develop which seem to indicate different types of dropouts. By applying this factor analysis, it was found that several types of dropouts emerged according to reasons for leaving: the factors identified were social, academic, social-academic, too intellective-cosmopolitan, and religious (see chapter 5). It must be noted that there

were many students who dropped out who did not fall under any of the five factors that were developed, however, as further analysis is effected and as more is learned about the dropout process, these five types will probably be expanded to be more inclusive of all dropouts.

The second method which this author is presently exploring in another study at the University of Massachusetts is to classify dropouts into mutually exclusive types on the basis of variables shown in the research literature to be at least somewhat related to dropping out of college. After developing this classification, the constructed types with a variety of other social and psychological variables are cross tabulated. Variables which are significantly related to dropping out or persisting can then be used for refining to a more natural classification or typology which subsequently may predict which types of students are likely to drop out or, similarly, to persist.

To explain more substantially the possibilities proffered through the construction of a typology for college student dropouts, a brief description of a typology presently being developed with some of the findings of the preliminary analysis are included here.

Originally two variables, sex and academic ability at the time of college matriculation, suggested the creation of four basic types of students: 1) high ability males, 2) low ability males, 3) high ability females, and 4) low ability females. Within each of these four basic types, controlling for academic status at the university (that is whether a student persisted in college or dropped out), two types of persisting students were identified (those who had a grade point average of 2.0 and above-successful stayins and those whose grade point average was below 2.0-unsuccessful stayins), and three types of dropouts were identified (those who were successful but dropped out voluntarily-successful dropouts, those who were unsuccessful but dropped out voluntarily-unsuccessful dropouts, and those who were dismissed for academic failure-academic dropouts). It should be noted that there may be important differences between students who withdrew voluntarily in good academic standing and those who dropped in poor academic standing or were flunked out.

Initial results of this study which was conducted at a large New England university show that after five semesters the overall dropout rate for the class of 1970 was 31 percent. The dropout rate broken down for the four types was: 24 percent for high ability males, 36 percent for

low ability males, 27 percent for high ability females, and 33 percent for low ability females. Furthermore it was found that high ability females tended to be over-represented in the successful dropout class, and low ability males were over-represented in the academic failures.

When the four basic types were compared on many other variables, the following patterns emerged: The types of high ability males who were more likely to drop out had fathers who possessed a college degree; viewed themselves, when compared to their peers, as average in intellectual confidence; viewed themselves as below average in popularity with the opposite sex; and did not think that they would receive a college degree or thought that they would complete only the Bachelor's Degree. High ability males who were likely to persist had fathers who had post graduate education; fathers who were foreign born; rated themselves far below average in social confidence or above average in social confidence; rated themselves far above average in their politically liberal orientation; were reared in a Jewish home; and aspired to become a doctor, dentist, or lawyer.

A quite different pattern emerges for low ability males. Those more likely to drop out had fathers who had completed only some of his high school education, or, surprisingly enough, had post graduate education; viewed themselves far below average in social confidence and intellectual self-confidence; were politically conservative; reared in a Protestant home; and expected to achieve a Ph.D. or expected to receive no degree at all.

Low ability males who were more likely to persist in their studies were reared in a Jewish home, had fathers who had completed high school, and expected to go on for a law degree.

High ability females who were more likely to drop out rated themselves far above average in social confidence, intellectual self-confidence, and political liberalism; rated themselves above average in popularity with the opposite sex.

High ability females more likely to stay in had foreign born fathers; had fathers who had achieved a grammar school education or less; viewed themselves as below average in social confidence, intellectual confidence, and popularity with the opposite sex.

Low ability females who were likely to drop out had fathers with either grammar school education or less or some high school education;

viewed themselves as above average in political liberalism; and either expected not to receive a degree or expected to receive a Ph.D.

Low ability females who were more likely to persist viewed themselves as far above average in social confidence; below average in popularity with the opposite sex; below average in political liberalism; and were reared in a Jewish home.

It is obvious from these initial findings that the constructed types do not form natural classifications in their present form, however, as more analysis is done it will be possible to begin reconstructing types which form a more natural classification. For example, among the low ability female group a direct contradiction seems to exist in that more dropped out having either very high or very low expectations. Clearly students who held these two distinct views would seem to be different types.

As further analysis of many different variables is made, some patterns should emerge which should suggest new and more natural classifications. There are some indications in the preliminary analysis that a typology of dropouts might emerge which in some ways parallels those types suggested by the findings in this study. For example, the social type might be further broken down into two types of social dropouts, those who are "too social" and those who have not adjusted socially.

Although a complex undertaking, attempts are being made to develop typologies of students which will aid in understanding the dropout process and assist in predicting potential dropouts, both of which may help to explain why some students drop out while others stay in. The typological method appears the most helpful in dropout research of this nature because 1) it helps to refine concepts, 2) it identifies relevant variables, 3) it leads naturally to more sophisticated theoretical development as the typologies become more natural and as relationships between dropout and other variables become more clearly specified and understood. The problem with the typological approach is that certain typologies may be assumed to approach the natural classification when in fact they do not.

Another problem is that we need more information about the actual dropout process and about student subcultures than much of the present research data allow. It is necessary to get into the minds of the students to find if there are actually natural types as potential dropouts.

The handling of data is another problem as when mutually exclusive categories are used, and a type is chosen on the basis of several variables, through cross-classification the addition of each variable increases geometrically the number of units under analysis. In addition typologies do not represent reality in a one-to-one relation; individuals seldom fit perfectly into constructed types. Although typologies can create problems if the researcher attempts to fit his data to the types instead of redefining his types so that they become more closely aligned with his data, they do have the potential to handle vast amounts of data more meaningfully and to aid in the refinement and development of new concepts and theories. In spite of the criticism of typologies from a rigorous methodological point of view, they do serve an important and necessary function in the early stages of theoretical development of an area.

CHAPTER FOUR

DROPOUTS AND PERSISTERS: AN OVERVIEW

University of Michigan

Robert Cope

Introduction

On the first phase of analysis the entrance characteristics of dropouts and persisters were compared as they were related to the salient environmental presses. The major content of this chapter thus discusses the method of gathering data and general findings from the University of Michigan.

METHOD

Data Gathering: The College's Environment

What can we say about the University, particularly about the University's liberal arts college? The College's catalog (1964-65) refers to the enlargement of the "capacity for the enjoyment of living," "the expansion of personality and the cultivation of tastes," "clarification of the goals of living," "preparation for good citizenship, broadening and enriching experiences in music and the theater," and "aid to the growing mind and heart of the student."

Aside from its nature as a liberal arts college it is coeducational; slightly over half of the freshmen in the College are females.

A relatively large proportion of the students (at the time of the study) came from out-of-state (25-30 percent of each entering freshman class). Many were (and still are) from New York state--mostly New York City (1,734 students in 1962-63 were from New York state).[1] An additional 4-5 percent of the University student body comes from abroad. These data would suggest that the environment tends to be cosmopolitan.

In the 1960's students received national attention for their activity in the civil rights movement teach-ins, the Free University, and opposition (then and now) to the current military involvement in Southeast Asia. Student organizations such as the Student Non-violence Coordinating

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[1] Report of the Registrar, 1962-63.

Committee (SNCC) and the Students for a Democratic Society (SDS) were active on the campus. These activities would suggest a "liberal" cast to the population of both students and faculty.

The University is recognized for high standards of scholarship. Standards for entrance and retention are high. Most students would rank high on standard tests of intelligence or of scholastic aptitude. Well over half (about 2/3's) of the students in this study graduated from high school in the top 10 percent of their class.[1]

The student body is largely residential; a high proportion of the student body lives off-campus in private housing. This would suggest the existence of a "student community," i.e., students living among students rather than at home with their former friends and family.

As the principal investigator experienced this environment as an undergraduate a few participant-observer comments would appear to be in order. Student life is diverse, depending on one's interests. It can center around activities such as athletics, fraternity and sorority life, apartments, cultural offerings, student political and social organizations, and so on. There are presses for 1) intellectualism: great interest in analyzing value systems or ethics; 2) independence: independent study, independent organizations, little (even in the late '50's) in loco parentis on the part of the University, courses are easily waived; 3) social sophistication: knowledge of what is "in," having been places; 4) achievement: a high state of academic competition and high performance is expected.

When these observations are combined a word picture of the College forms. This word picture is illustrated in Figure 1.

FIGURE 1. Selected characteristics attributable to the College

Other selected dimensions not considered typical of the College	Selected dimensions of the College
Friendly, group welfare	Independence
Practical, applied	Intellectual
Social, interpersonal	Humanistic

[1]Even among the dropouts a high proportion did well in high school: 55 percent of the male and 63.5 percent of the female dropouts had graduated in the top 10 percent of their high school classes.

FIGURE 1. Selected characteristics attributable to the College (continued)

Other selected dimensions not considered typical of the College	Selected dimensions of the College
Vocational	Esthetic
Social development	Cosmopolitan
Conformity	Liberal
Effective citizenship	Social sophistication
In loco parentis	Cultural and literary education
	Understanding different philosophies and ways of life
	Critical thinking

Aside from these participant-observer descriptions--one means of describing an institution--evidence from empirical studies supported these observations in expected ways. For example, "profile" data on 1,015 four-year colleges and universities was reported by Astin (1965). These data consist of two parts: 1) five freshmen input factors; and 2) eight scales of college traits.

The freshmen input factors assume that the characteristics of the college environment are largely dependent on the characteristics of the student body. The five factors are listed and described in Figure 2.

FIGURE 2. Freshmen input factors

1. Intellectualism: indicating high scores on tests of academic aptitude, and a high percentage of students pursuing careers in science and planning to go on for the Ph.D.
2. Estheticism: a high percentage of students who were active in literature and art in high school and aspire to careers in these fields.
3. Status: a high percentage of students from high socio-economic backgrounds.
4. Pragmatism: a student body with high percentages of students planning careers in "realistic fields" (engineering, agriculture).
5. Masculinity: a high percentage of men, a high percentage of students seeking professional degrees (LLB, MD, DDS) and a low percentage of students planning careers in social fields.

In relation to the average scores for other Big Ten universities on these scales the University was rated highest on Intellectualism and Estheticism, and about average on Status, Pragmatism and Masculinity (Astin, 1965, p. 68).

The eight scales measuring other college traits are illustrated in Figure 3.

FIGURE 3. Scales of college traits[1]

Scale	Reported as measuring
1. Estimated Selectivity	The average ability level of the student body.
2. Size	The total full-time enrollment.
3. Realistic Orientation*	An institution characterized by a preference for the practical and concrete rather than the abstract.
4. Scientific Orientation*	The acquisition of intellectual as opposed to social skills is emphasized.
5. Social Orientation*	Social interaction and service to others is likely to be emphasized.
6. Conventional Orientation*	Characterizes an institution with a relatively high degree of conformity among students.
7. Enterprising Orientation*	An institution encouraging "the development of verbal and persuasive skills and to foster an interest in power and status."
8. Artistic Orientation*	An institution that is likely to emphasize esthetic and humanistic pursuits.

*The "orientation" measures are based on the proportions of baccalaureate degrees awarded by the institution in various fields of study. For example, the Artistic Orientation is based upon degrees in music, writing, languages or fine arts.

Using the scales in Figure 3 as reference where did the University rank relative to the other Big Ten institutions? The University was rated highest in Selectivity and lowest in Conventional Orientation. The University was substantially above average in Social Orientation. On the other Orientations (Size, Realistic and Enterprising) the University was about typical (average) for the Big Ten. The Big Ten institutions as a group average exceeded the averages for institutions in Astin's sample (N=1015) on all Orientations, except Social and Artistic.

Other information relative to the University environment was sought directly from several of the investigators mentioned in other parts of this

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[1]Astin, 1965, pp. 55-56.

report: Pace, Stern, Thistlethwaite and Astin. Some of their comments (letters) were not for "publication"; however, it was clear that their observations from empirical findings were similar to each other and tended to agree with the published literature.

One of these investigators commented on data from a sample of over 200 other colleges and universities. He observed that the University, on scales that varied more than one and one-half standard deviations from the mean for this group of colleges, was characterized by: 1) a high percentage of graduate students teaching freshmen courses; 2) courses which tended to be "much larger than the average freshman courses in other institutions"; and 3) courses in which attendance was seldom taken or seats seldom assigned. The same investigator reported that the students viewed "the environment at the University as being extraordinarily competitive academically and as being very 'cold.'" He also reported that, "Their biggest complaint appeared to be lack of personal contacts both with classmates and with faculty. They also felt that the campus is much too big and that the students are numbers like 'numbers in a book.'" Nevertheless, the overall evaluation of the institution by the respondents was reported to be "fairly positive" (personal correspondence).

Another investigator reported (again personal correspondence) that the University appeared to be "deviant" from other institutions on five of fourteen scales. By deviant this investigator was referring to the University ranking among the upper or lower 10 percent of institutions on these scales. These data were based upon the responses of 45 male and female participants in National Merit Scholarship competition (early 1960's). He reported that the University was characterized by high student presses on the scales measuring Competition, Estheticism, Reflectiveness and Intellectualism, and "relatively weak faculty press for Compliance." These scales and representative items are illustrated in Figure 4.

FIGURE 4. Selected scales that describe the University and representative items[1]

Scale	Item
Competition	The competition for high achievement is intense. (T)

[1]The illustrated items are from Thistlethwaite and Wheeler (1966).

FIGURE 4. Selected scales that describe the University and representative items (continued)

Scale	Item
Estheticism	There is a lot of interest here in poetry, music, painting, sculpture and architecture, etc. (T)
Reflectiveness	Students have little interest in the analysis of value systems and the relativity of societies and ethics. (F)
Intellectualism	Students here rarely get excited about a campus speaker. (F)
Compliance (Not found to be descriptive)	They [faculty] typically demanded strict compliance with all course requirements. (T)

In a study reported about the time of the followup study (1965), and based upon the responses of 219 students, the University was rated high on scales of Awareness (96th percentile) and Scholarship (92nd percentile) relative to an unreported number of other institutions. The items of the Awareness scale, according to the manual,[1] "reflect a concern and emphasis on three sorts of meaning--personal, poetic and political...the search for personal meaning...concern about events around the world...search for political meaning and idealistic commitment...an awareness of esthetic stimuli." The items of the scholarship scale "describe an academic scholarly environment...Intellectual speculation, an interest in ideas as ideas, knowledge for its own sake, and intellectual discipline--all these are characteristic of the environment."

Summary: The Environment

Certain distinguishing factors about the University of Michigan tend to emerge and be consistent among these data and comments. Aside from being a large university, the environmental presses appear to be 1) intellectual: an academic emphasis on the abstract and theoretical; 2) reflective: there is active inquiry of value systems and ethics; 3) academically competitive: there is a substantial emphasis on high achievement; and 4) esthetic: there appears to be a lot of interest in the fine and

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[1] College and University Environment Scales, a preliminary technical manual, published by Educational Testing Service, Princeton, New Jersey, 1963.

performing arts. Furthermore, there seems to be at least one characteristic that is anti-press, while at the same time being a press. This is the permissive nature of the campus environment as evidenced, for example, by low faculty press for compliance, large numbers of students off campus in apartments and fraternities, little social or academic conformity expected among students, and the large, presumably impersonal, classes for underclassmen.

These presses served as guides to the counterpart social and personality dimensions that we examined. For instance, the politically liberal press suggested an examination of conservative-liberal personality orientations; likewise, since this is a secular institution, stressing reflective thought, dimensions of religion were examined. Thus, items were sought that on an a priori basis were alike, i.e., seem to be measuring the same thing. The analysis is on an a posteriori basis, i.e., by making comparisons between the dropouts and stayins on the basis of independent variables one suggests from the effect the cause. Thus, characteristics that were found to be more common among dropouts were suggestive of personality characteristics that may not have been congruent with this particular institution's presses.

Data Gathering: The Student Characteristics

Extensive entrance data were collected during pre-freshmen orientation on two complete classes (N=4150) entering the College of Literature, Science and the Arts (classes of 1966 and 1967). These data consisted of written responses to a specially prepared questionnaire (Appendix A) which was designed to investigate the impact of the college on individual students as an outcome of the characteristics of the college and of individual students. In the fall of 1965 additional data were collected by a followup survey from the students who had withdrawn from these entering classes. The purpose of the followup survey was to determine why the students dropped out and to assess the nature of the students' problems while in attendance. The followup questionnaire is illustrated in part B of the Appendix. A similar questionnaire was used in the Washington phase of the study (also illustrated).

Returns, after two followup letters, were received from 79.8 percent of the dropout sample (N=1131). There were fewer returns proportionately from students who had obtained lower grade point averages; otherwise, the

characteristics (age, sex, and selected psychological dimensions) of the respondents and non-respondents were alike.[1] Since there seemed to be no response bias, the non-respondents were not considered to be a source of invalidity in the analysis.

FINDINGS

The responses of males and females are shown separately, since the variables were found to be related in sex-related patterns.

Politically Liberal Press

As indicated the campus climate has "liberal" or "new left" overtones. The related social and personality dimensions, taken from the entrance questionnaire, were voting behavior, party choice and attitudes toward public issues.

Illustrated in Table 2 are the relationships between preferences for a candidate in a national election, specific parties, a general political orientation, and the likelihood that the respondent would later be a dropout.

Those male students who would have voted for the Republican candidate in the Presidential campaign were more likely to be among the dropouts when the followup study was initiated. Among male dropouts 36.1 percent would have voted for the Republican candidate, whereas among the persisters 22.6 percent would have voted for this candidate. Among the female sample almost equal proportions of dropouts and persisters selected the Republican candidate: 23.8 percent of the dropouts compared to 22.9 percent of the persisters.

The same relationship is illustrated where the student is asked to indicate his general preference for a political party. Here it will be noted that among male dropouts 43.2 percent selected the Republican Party, whereas among male persisters 36.7 percent considered themselves to be Republicans. Among the female sample there is virtually no difference in the way they responded to the question and the likelihood of becoming a dropout.

The same relationship is again illustrated when the student was asked to describe himself in terms of political orientation on a bi-polar scale

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[1] The details of the initial data collection and followup are described in R. G. Cope, "Nonresponse in Survey Research as a Function of Psychological Characteristics and Time of Response," The Journal of Experimental Education, pp. 32-35, Spring 1968.

TABLE 2

Political Orientation

Question: If the last Presidential election were being held today with the same candidates, which would you favor?		Democratic Candidate %	Republican Candidate %	Don't Know %	
Male:	Dropout (260)	53.8	36.1	10.0	df = 2
	Stayin (331)	64.9	22.6	11.7	$x^2 = 12.792^{***}$
Female:	Dropout (306)	66.0	23.8	10.1	
	Stayin (375)	62.4	22.9	14.6	$x^2 = .864$

Question: Regardless of immediate issues, how do you usually think of yourself, as a Republican, or Democrat, or what?		Democratic %	Republican %	Socialist %	Independent %	Don't Know %	
Male:	Dropout (271)	23.2	43.2	.7	27.3	5.5	df = 3
	Stayin (349)	29.5	36.7	2.6	26.9	3.7	$x^2 = 6.774^{*}$
Female:	Dropout (315)	37.5	33.3	.3	26.0	2.9	
	Stayin (369)	35.3	35.1	1.0	26.3	2.3	$x^2 = 3.076$

		Politically Conservative				Politically Liberal			
Question: How would you describe yourself as a person?		Extremely %	Quite Closely %	Slightly %	Equally Relevant %	Slightly %	Quite Closely %	Extremely %	df = 6
Male:	Dropout (369)	8.5	12.9	11.8	22.9	11.1	18.8	13.3	$x^2 = 2.969$
	Stayin (347)	7.4	10.9	10.9	20.3	11.7	21.8	16.3	
Female:	Dropout (312)	6.0	9.2	8.9	19.7	17.1	21.6	16.5	$x^2 = 8.796$
	Stayin (387)	4.8	13.1	12.6	20.2	14.9	20.5	11.6	

* $p < .10$
*** $p < .01$

of self-descriptive adjectives. Again, the male dropouts tend to think of themselves as politically conservative; a higher percentage of the male dropouts described themselves on the politically conservative side of the scale than did the persisters.

As in previous examples the female responses tended not to differentiate consistently between the dropout and persister. There is, interestingly, a suggestion among the female responses for an opposite tendency, i.e., more tendency for liberal responses among the female dropouts. There is also the suggestion of a curvilinear relationship; both the "extremely conservative" and the "extremely liberal" female responses tended to be found among the dropouts.

Thus, as far as politically related items are concerned, males and females differed systematically on all the items; males who perceived themselves as politically conservative were more likely to be among dropouts; among females political orientation was unrelated to dropout behavior.

Religion: Strength of Faith and Preference

Male students professing a stronger religious orientation showed a greater likelihood of dropping out. The same relationship, as in the political orientations, did not appear for the female student.

Males who responded as having attended religious services (Table 3) "once a week or more" are substantially more likely to be among the dropouts (40.6 percent) than among the persisters (26.9 percent), whereas those male students responding as attending "a few times a year" are substantially more likely to be among the persisters (30.9 percent) than the dropouts (12.5 percent). In contrast, among the females there is virtually no difference between dropouts and persisters regarding the frequency of attending religious services. The implied relationship that a stronger religious faith is related to the frequency of attendance at religious services is examined more closely later when we look at religious preferences among the students.

A second measure of the strength of religious faith is presented by responses to a bi-polar set of descriptive adjectives which asked the person to describe himself on a religious-agnostic scale. Males responding "quite closely" and "extremely religious" are more likely to be seen among the dropouts (39.5 percent) than among the persisters (34.6 percent).

A final example of the religious orientation of the male dropout is suggested by his response to the question about the importance of different

TABLE 3

Religious Orientation

Question: How often do you attend religious services?		Once a Week or More %	Two or Three Times a Month %	Once a Month %	A Few Times a Year %	Rarely Over the Years %	Never %	df = 5
Male:	Dropout (271)	40.6	21.8	8.9	12.5	7.7	5.2	$x^2 = 33.151^{****}$
	Stayin (349)	26.9	19.2	10.3	30.9	8.0	3.4	
Female:	Dropout (315)	40.6	14.6	8.6	24.1	5.7	4.8	$x^2 = 2.797$
	Stayin (369)	41.2	17.4	7.3	24.0	6.6	3.0	

Question: How would you describe yourself as a person?		Religious: Extremely %	Religious: Quite Closely %	Religious: Slightly %	Equally Relevant %	Agnostic: Slightly %	Agnostic: Quite Closely %	Agnostic: Extremely %	df = 6
Male:	Dropout (271)	14.0	25.5	21.0	11.4	7.4	10.0	9.6	$x^2 = 5.333$
	Stayin (349)	9.7	24.9	23.2	10.0	10.0	8.9	11.7	
Female:	Dropout (315)	18.1	36.2	17.8	6.0	6.3	6.0	8.9	$x^2 = 3.969$
	Stayin (369)	21.0	31.1	20.7	5.1	4.8	6.1	9.3	

Question: When you think of your life after college, how important do you expect each of the following areas will be to you?		Religious beliefs or activities: Little or No Importance %	Important %	Very Important %	Crucially Important %	df = 3
Male:	Dropout (271)	17.7	37.6	30.3	14.0	$x^2 = 4.040$
	Stayin (349)	20.9	42.4	24.9	11.5	
Female:	Dropout (315)	16.2	36.2	33.7	13.3	$x^2 = 2.521$
	Stayin (396)	13.1	39.6	30.8	15.2	

**** $p < .001$

areas of life after college. These data indicate responses on a four-point intensity scale of importance from "little or no" to "crucially." Among the dropouts a larger proportion feel that religious beliefs or activities are "very" and "crucially important" (44.3 percent), compared to persisters (36.4 percent). Again, among females the differences are not as great and are not as consistent as in the male sample.

To examine this question further it may be helpful to examine the religious faiths as proportionately represented in the entering student population. Table 4 contrasts dropouts and persisters on the basis of religious preference. There are a number of striking differences among religious preferences for men. The most striking difference appears to be in the dropout and persister percentage for males with a Jewish religious preference, i.e., 8.9 percent among the dropouts are Jewish in contrast to 26.9 percent of the persisters. Among the Catholic males there is a larger proportion among the dropouts (21.8 percent) than among the persisters (14.8 percent). And finally, even among the male students professing a preference for one of the Protestant faiths we find a somewhat larger percentage of them among the dropouts (43.6 percent) compared to the persisters (37.8 percent).

The data for the female sample suggest the same tendency, i.e., higher dropout rates among Catholics and Protestants and a lower dropout rate for Jewish; however, the differences in rates between dropouts and persisters for the females by religious preference are clearly not nearly as great as those seen in the male sample. On the whole, the data for the female sample like the data in all previous tables indicate little if any relationship with dropping out or persisting.

What might explain these differences? A possibility is that the environmental presses may be perceived or compensated for differently depending upon the sex of the student. For example, among females it may be that strong religious convictions are expected, whereas among males a strong religious conviction may be considered differently; the female with strong religious convictions is more likely to be respected for her views; a male, however, at least among males, may be chided.

At this stage in their development students may be primarily concerned with what they appear to be in the eyes of others, as compared with what they feel they are; therefore, the more religious males may, in a secular environment that stresses self inquiry and awareness, feel more out of

TABLE 4

Religious Preferences of the Dropouts and Stayins

	Male		Female	
	Dropout	Stayin	Dropout	Stayin
Protestant	43.6%	37.8%	48.0%	47.7%
Catholic	21.8	14.6	17.5	15.9
Jewish	8.9	26.9	20.0	24.7
Orthodox	.4	.3	1.6	--
Other and no preference	25.5	20.4	12.9	11.6
Number	(271)	(349)	(315)	(396)
df = 2*	$x^2 = 20.861$****		$x^2 = 1.980$	
	$p = < .001$		p = N/S	

* Protestant, Catholic, and Jewish preferences only

**** $p < .001$

place than the female. At this point in the development of the data analysis it only seems appropriate to suggest ways in which the environment and personality characteristics are interacting. As more data are examined, patterns begin to form, questions are posed, answers begin to be seen. Our intent is not to be too definitive this early in the report.

Size as a Press

The University was and still is among the largest of such institutions in the country.[1] Thus it was anticipated that students of both sexes from the smaller communities would be over represented among withdrawals from the University. The relationship between the place where the student lived most of his life and dropping out is presented in Table 5.

These indicate that both males and females who lived most of their lives in communities of less than 50,000 population are more likely to be among the dropouts. A "breaking point" is reached at community populations of about 50,000, i.e., below 50,000 for both sexes the dropout percentages are higher than the stayin percentages.

The breaking point figure of 50,000 is suggested again by these data on students reporting a home address in Michigan's cities of 50,000 or more. These students were <u>not</u> significantly more likely to be among the dropouts. Students, on the other hand, who reported addresses in communities "Anywhere else" in Michigan (the smaller among the cities, towns, and rural communities) were much more likely to be dropouts.

While the first two questions in Table 5 indicate something about the size of the residential community, the third question indicates something about the size of the previous academic community (high school). Again, there is a positive relationship between smaller size and dropping out. Here the breaking point seems to be in high schools with graduating classes between 200 and 400 students. The greatest percentage differences are in marked favor of students coming from schools with graduating classes in excess of 600 students, i.e., there are substantially more students from high schools with the largest graduating classes among the persisters (males, 21.2 percent; females, 24.5 percent) as contrasted to the dropouts (males, 12.9 percent; females, 14.9 percent).

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[1] The University of Washington is equally as large today.

TABLE 5

Community Size

Question:	Which of the following places best describes the place where you lived most of your life?	Farm or in a village (2,500 or less) %	Town 2,500 to 9,999 %	Small city 10,000 to 49,000 %	Med. city 50,000 to 200,000 %	Metropolitan city 200,000 and over %	Suburb of metropolitan city %	df = 5
Male:	Dropout (271)	12.5	10.7	19.6	15.9	17.3	21.0	$x^2 = 20.759^{****}$
	Stayin (349)	7.2	5.7	14.9	17.5	28.4	25.5	
Female:	Dropout (315)	10.5	10.8	16.2	14.6	22.2	24.1	$x^2 = 13.301^{**}$
	Stayin (396)	4.8	7.8	15.4	20.2	25.0	25.5	

Question:	Where is your home address now?	Michigan: Metropolitan area %	Michigan: Cities of 50,000+ %	Michigan: Anywhere else %	New York City %	Northern-eastern states %	North central states %	Southern states	Western states %	Non U. S. A. %	df = 7
Male:	Dropout (271)	28.4	13.3	32.8	1.8	5.9	10.7	2.6	---	3.7	$x^2 = 29.246^{****}$
	Stayin (349)	33.2	12.6	18.3	5.4	4.9	16.9	3.4	.6	1.7	
Female:	Dropout (315)	36.5	12.1	29.2	2.5	4.4	9.2	2.9	1.3	1.3	$x^2 = 30.251^{****}$
	Stayin (396)	32.6	12.4	19.9	3.8	5.8	17.4	2.5	---	1.5	

Question:	About how many students were there in your high school graduating class?	49 or less %	50-99 %	100-149 %	150-199 %	200-399 %	400-599 %	600 or more %	Not ascertained %	df = 6
Male:	Dropout (271)	5.9	17.0	11.8	7.7	26.6	15.5	12.9	2.6	$x^2 = 20.931^{***}$
	Stayin (349)	4.6	10.3	7.4	5.2	27.5	23.2	21.2	.6	
Female:	Dropout (315)	7.0	14.3	8.3	9.8	28.9	15.6	14.9	1.3	$x^2 = 20.786^{***}$
	Stayin (396)	4.3	8.1	9.3	8.1	24.7	20.5	24.5	.5	

** P $<$.05 *** p $<$.01 **** p $<$.001

Social and Esthetic Presses

Generally, those females who seemed to be less esthetically inclined were over represented among the dropouts. Illustrated in Table 6 are responses to questions regarding what the students did in their leisure time and how they responded to questions dealing with esthetic matters.

Comparing the proportion of male persisters and dropouts in any category tends not to indicate any large or consistent differences; however, among females the persisters are consistently more likely to have participated in and were more likely to enjoy esthetic activities than the dropouts. These data suggest that the social presses effect men and women students differently, but in expected ways. Female responses, for example, to the question about the importance of different areas of life indicate that the least cultured female was over represented among the dropouts. At the level of "little or no importance" there is hardly any differentiation among the males (27.3 percent vs. 25.2 percent) yet among females there is a substantial difference (17.1 percent of the dropouts vs. 9.6 percent of the persisters).

Another factor suggesting that the social environment may affect the female differently than the male is seen by an examination of the family incomes as reported by these students. All students giving financial hardship as a reason for dropping out were removed from the sample before this comparison was made. Table 7 presents a distribution of responses among six categories of income. For the male, the differences in percentage distributions between the dropouts and persisters are generally not large except at the $4,000-$7,499 category where a larger percentage (19.9 percent) of the dropouts reported their family income, and at the $20,000 or more category, where 23.2 percent of the persisters as contrasted to 17.7 percent of the dropouts reported their family income. These figures tend to suggest a positive relationship between higher income and staying in for males; however, the relationship is not strong or consistent throughout the categories.

For contrast, these data for the female sample indicate that in the lower three categories (income under $10,000) among the dropouts we find 35.6 percent while among the persisters 25.0 percent. In the higher three categories (income of $10,000 or more) among the dropouts are 56.5 percent of the cases; whereas, among the persisters we find 69.6 percent. The

TABLE 6

Esthetic Orientation

Question: For each of the activities listed indicate whether you have done it, and how much you enjoyed it.		READING POETRY — Have Done This:					LISTENING TO SERIOUS OR CLASSICAL MUSIC — Have Done This:				
		Enjoyed it very much %	Enjoyed it moderately %	Did not enjoy it very much %	Have rarely done this %	df = 3	Enjoyed it very much %	Enjoyed it moderately %	Did not enjoy it very much %	Have rarely done this %	df = 3
Male:	Dropout (271)	12.5	33.9	31.4	19.2	x^2	34.3	24.7	17.0	12.9	x^2
	Stayin (349)	12.6	33.8	33.2	14.9	1.734	35.2	28.9	18.9	14.0	2.046
Female:	Dropout (315)	28.9	37.1	20.6	10.5	x^2	42.2	36.5	9.8	9.8	x^2
	Stayin (396)	37.9	34.3	14.9	9.3	8.093**	50.5	28.5	10.6	7.6	7.162*

Question: How would you describe yourself as a person?		Artistic				Inartistic			
		Extremely %	Closely %	Slightly %	Equally Relevant %	Slightly %	Quite Closely %	Extremely %	df = 6
Male:	Dropout (271)	6.3	15.5	17.3	8.9	17.3	17.3	16.6	x^2 = 3.727
	Stayin (349)	5.7	16.0	18.6	8.6	12.6	17.5	20.3	
Female:	Dropout (315)	11.4	22.5	18.1	6.0	10.5	13.0	17.8	x^2 = 10.932*
	Stayin (396)	11.9	20.7	25.3	4.0	11.1	13.6	11.4	

* p $<$.10

** p $<$.05

TABLE 6
(continued)

Esthetic Orientation

Question: When you think of your life after college, how important do you expect each of the following areas will be to you?		The world of art and music, the aesthetic life				
		Little or No Importance %	Important %	Very Important %	Crucially Important %	df = 3
Male:	Dropout (271)	27.3	45.8	19.6	7.0	x^2 = 5.725
	Stayin (349)	25.2	46.1	24.4	3.4	
Female:	Dropout (315)	17.1	49.8	25.7	7.0	x^2 = 8.733**
	Stayin (396)	9.6	52.5	25.5	8.1	

Question: How would you describe yourself as a person?		Handsome			Equally Relevant %	Plain			
		Extremely %	Quite Closely %	Slightly %		Slightly %	Quite Closely %	Extremely %	df = 6
Male:	Dropout (271)	4.1	30.3	34.3	14.8	9.2	5.9	1.1	x^2 = 1.978
	Stayin (349)	4.9	29.2	36.4	11.5	10.0	6.0	1.4	
Female:	Dropout (315)	2.2	20.9	27.6	14.3	18.4	13.3	2.9	x^2 = 19.386***
	Stayin (396)	2.5	31.3	30.1	11.1	11.6	8.8	2.3	

** $p < .05$

*** $p < .01$

TABLE 7

Family Income

Question: About how much total income do your parents earn yearly at the present time?		Less than 3,999 %	4,000 - 7,499 %	7,500 - 9,999 %	10,000 - 14,499 %	15,000 - 19,999 %	20,000 or more	df = 5
Male:	Dropout (271)	2.6	19.9	16.6	24.0	15.5	17.7	$x^2 = 7.546$
	Stayin (349)	2.6	13.5	15.5	28.7	14.6	23.2	
Female:	Dropout (315)	3.2	16.5	15.9	27.9	14.3	14.3	$x^2 = 16.037$***
	Stayin (396)	1.0	11.9	12.1	29.0	19.4	21.2	

*** $p < .01$

differences between dropouts and persisters are greater as the highest income category is approached.

It would appear from these data, at least for females, that there is a positive relationship between family income and staying in. Since the same strong relationship does not appear in the male samples, it seems as though females coming from less wealthy homes may, among youth from relatively wealthy families, find themselves more "out of place" than males. Again, only speculation.

Academic Presses

This section deals with matters that are more closely related to the academic presses: measured academic ability and personality orientations as measured by the Omnibus Personality Inventory (OPI). These measures are related to cognitive processes that differ among people and to some extent determine what use they will be able to make of their intelligence.

Despite the fact that the University of Michigan[1] maintains a highly selective admissions policy the range of scores on the college Entrance Examination Board's Scholastic Aptitude Tests--Verbal (SAT-V) and Mathematics (SAT-M)--are nevertheless substantial. The verbal score in liberal arts colleges has been found to be more closely associated with academic achievement than the score in mathematics, which has been a better academic predictor variable in fields such as engineering (Lavin, 1965).

Indicated by these data are substantially smaller differences in SAT scores between male dropouts and persisters than between the female samples. For both males and females the student with the greater academic promise (higher SAT score) is likely to be among the persisters. What is of particular interest, however, are the greater differences between the dropouts and stayin females than between the males.

It seems that these greater differences among females confirm what may be observed among students as they might be observed while comparing grades. Among girls it seems that earning a lower grade relative to other girls is more crucial, e.g., "Poor Mary." Whereas among men, a lower GPA (or specific grade) is more a, "Ha, Ha, look where I am" situation. This suggests that academic deficiencies are possibly more difficult for the female to handle.

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[1]The admissions policy of the University of Washington was recently reported to be even more selective.

TABLE 8

College Entrance Examination Board Scholastic
Aptitude Test - Mathematics Scores

		300 - 349 %	350 - 399 %	400 - 499 %	450 - 499 %	500 - 549 %	550 - 599 %	600 - 649 %	650 - 699 %	700 - 749 %	750 - 799 %	df = 7
Male:	Dropout (252)	---	.8	2.8	6.4	13.2	19.6	24.4	16.8	13.2	3.6	$x^2 = 16.940^{**}$
	Stayin (321)	---	--	2.1	3.9	12.7	14.6	21.8	21.8	17.0	5.6	
Female:	Dropout (297)	1.9	4.6	12.1	14.6	22.7	16.2	13.5	10.5	3.6	.3	$x^2 = 29.416^{****}$
	Stayin (377)	1.6	1.2	6.8	14.8	17.3	19.6	18.0	12.5	7.5	1.1	

** $p < .05$

**** $p < .001$

TABLE 8
(continued)

College Entrance Examination Board Scholastic
Aptitude Test - Verbal Scores

		300 - 349 %	350 - 399 %	400 - 449 %	450 - 499 %	500 - 549 %	550 - 599 %	600 - 649 %	650 - 699 %	700 - 749 %	750 - 799 %	df = 7
Male:	Dropout (252)	.4	3.6	9.6	15.6	18.4	18.4	18.4	10.0	6.0	.4	x^2 = 11.403
	Stayin (321)	--	1.2	4.9	14.3	18.4	20.2	19.9	12.8	7.1	.9	
Female:	Dropout (297)	1.6	4.3	9.3	21.2	19.6	17.8	13.2	9.2	2.9	.6	x^2 = 44.121****
	Stayin (367)	---	2.9	5.9	8.8	17.7	24.7	19.6	14.1	5.9	.6	

**** p < .001

These data also suggest that among females verbal aptitude, as measured by the Scholastic Aptitude Test, is more crucial than it is for the males. This sex difference was not anticipated; however, it does seem to make a certain amount of sense. That is, among females there may be a greater reliance on verbal skills.

Omnibus Personality Inventory

The Omnibus Personality Inventory (OPI), a test developed at the Center for Research and Development in Higher Education at Berkeley, was developed to assess personality characteristics among normal and intellectually superior college students. The OPI has a variety of scales that can be used in varying combinations.

Most of the names used for the scales appear to be fairly objective descriptions of psychological variables. The Religious Liberalism scale indicates how "liberal" a person is in his ideological commitments, i.e., how skeptical a person may be of conventional, orthodox religious beliefs and practices.

The OPI scales seem particularly well suited to an analysis of the intellectual demands of the college, i.e., they appear to measure dimensions appropriate to a liberal arts curriculum, e.g., philosophy, virtue, dramatics, abstract thought, and so on. Thus, one would expect these dimensions to distinguish between those students who presumably had their needs met (persisters) and those who may have had interests that tended not to be congruent with a liberal arts orientation (dropouts).

The categories of response are collapsed into low, medium, and high categories. This style of presentation (low, medium, high) appears to be favored at the Center for the Research and Development in Higher Education at Berkeley, since Hessel (ca. 1964) and Tillery (1964) and Trent, et. al. (1965) favored this approach. The low range corresponds with approximately the lowest 1/3 of any scale, the medium range with the middle third of the scale and the high, the top 1/3 of the scale.

The RL (Religious Liberalism) scores support the findings reported earlier, i.e., higher scoring males (more liberal in their views) tend to be found among the persisters (26.8 percent) rather than the dropouts (18.6 percent). Among the females, the RL scores indicate virtually no difference.

The ES (Estheticism) scores support our earlier observations as well, i.e., no difference among the males but among the females those

TABLE 9

Omnibus Personality Inventory Scores

	Religious Liberalism		Estheticism		Complexity		Impulse Expression		Social Maturity		Theoretical Orientation		Thinking Introversion	
	D	S	D	S	D	S	D	S	D	S	D	S	D	S
						MALE								
Low	24.9	15.4	30.0	30.0	14.9	13.6	21.8	28.0	5.3	3.0	8.9	8.3	6.3	5.1
Medium	56.3	58.0	55.6	54.5	61.9	66.1	59.2	53.7	60.3	55.6	50.2	53.8	65.7	67.7
High	18.6	26.8	14.0	15.6	23.2	20.3	19.1	18.5	34.5	41.6	41.3	38.1	28.0	27.4
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
df = 2	x^2=11.486		x^2=.106		x^2=1.227		x^2=4.327		x^2=4.801		x^2=1.011		x^2=.566	
	p <.01		p N/S		p N/S		p N/S		p <.10		p N/S		p N/S	
	N = 257 Dropouts 340 Stayins													
						FEMALE								
Low	27.1	29.8	16.2	9.8	21.7	20.2	49.3	52.1	9.9	5.3	20.7	14.6	6.0	2.7
Medium	57.1	54.6	58.0	57.0	61.0	62.3	42.4	44.7	61.1	60.3	59.9	64.5	61.3	60.5
High	15.5	15.6	25.7	33.5	17.2	17.8	7.4	3.3	27.6	34.5	19.1	23.8	32.4	37.0
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
df - 2	x^2=.840		x^2=9.806		x^2=.091		x^2=3.210		x^2=4.961		x^2=6.036		x^2=5.646	
	p N/S		p <.01		p N/S		p N/S		p <.10		p <.05		p <.10	
	N = 308 Dropouts 390 Stayins													

with lower scores (less interest in esthetic matters) were more likely to be found among the dropouts (16.2 percent) than the persisters (9.8 percent).

The CO (Complexity) scores do not appear to differentiate between dropouts and persisters for either sex. The IE (Impulse Expression) scale suggests a slight relationship (not significant) between a low score and the greater likelihood of being among the persisters for both sexes.

The SM (Social Maturity) scales for males and females are similar, suggesting that students with higher scores are more likely to be among the persisters. This is an interesting scale to examine more closely. While most of the scales appear to be fairly objective descriptions of psychological variables the SM scales may actually be measuring something that might have a different title. The following are some SM items:

1. Society puts too much restraint on the individual. (T)
2. Unquestioning obedience is not a virtue. (T)
3. Parents are much too easy on their children nowadays. (F)
4. I am in favor of strict enforcement of all laws, no matter what the consequences. (F)
5. Only a fool would try to change our American way of life. (F)
6. Divorce is often justified. (T)

It would appear that the items may be measuring characteristics of nonauthoritarianism, skepticism and perhaps rebellion. There may be some value judgment in calling these characteristics "social maturity"--depending on one's point of view. In any case, high scorers for both sexes were more likely to be found among the persisters.

The TO (Theoretical Orientation) scales do not seem to differentiate clearly between the samples; however, among females there is a suggestion that the low TO females are more likely to be among the dropouts (20.7 percent) than the persisters (14.6 percent).

The TI (Thinking Introversion) scale, like the TO scale, does not clearly indicate differences for either sex, except that slightly higher scoring TI females are more likely to be among the persisters.

Three of these OPI scales seem to have a close relevance to cognitive styles. (By cognitive styles one is referring to mental processes by which people tend to approach knowledge or organize their thinking). The three scales in the OPI are:

Complexity (CO) - measuring critical-independent thinking,

intellectualism, estheticism, and tolerance for ambiguity. (Sanford and Yonge, 1960, pp. 18-24).

Theoretical Orientation (TO) - measuring an interest in scientific activities, including a preference for using the scientific method in thinking.

Thinking Introversion (TI) - measuring liking for reflective-abstract thought.

Since the environment in the College (liberal arts) would seem to emphasize the use of these styles of thinking, one would expect the scales to differentiate between our samples. The differentiation would be expected to be similar for the males and females since the academic demands (as contrasted to the social demands) on each sex should be about the same.

The evidence from these OPI scales (CO, TO and TI) would not seem to support clearly this presumption, i.e., the differences between the persisters and dropouts on these scales are not large and in cases where differences are noted they are not the same for the males and females. Since this is the case we did not feel that the OPI scores clearly indicate differences between the samples in the area of cognitive styles. The OPI scales did, however, support earlier observations, e.g., religiously conservative males tend to drop out; also, less esthetically inclined females tend to drop out. And the SM scale indicates that the student who tends to be nonauthoritarian and skeptical (perhaps rebellious) tends to stay in. It is suggested that these last three OPI variables are related to the environmental presses, e.g., secular, esthetic, permissive.

SUMMARY AND IMPLICATIONS

In order that the relevant student characteristics be focused upon out of the larger body of data, it was necessary first to identify the institution's presses. Selected student characteristics were then examined to determine whether or not they appeared to mesh with the related environmental presses.

At this stage of the investigation we were also concerned with analyzing the data in relation to a stage of human development. It was suggested that during this stage the developmental tasks of men and women were different, therefore resulting in different behavior relative to the environmental presses. It is suggested that the environmental presses might broadly be considered in relation to two dimensions: social and

academic.[1] The findings are easily summarized. Figure 5 illustrates the salient social presses and academic presses of the institution.

Social Press

Male and female students were shown to vary considerably in their dropout or stayin behavior relative to most of the social presses. Students of both sexes from the smaller communities appeared to have difficulties at the University. Otherwise, politically liberal males, and those with strong religious beliefs, were found to drop out. Among females it was noted that the less wealthy, less esthetically inclined and less attractive were more often found among the dropouts.

This pattern seems to make social-psychological sense in view of the process of socialization that tends to differentiate men and women in our society. Men and women play different roles.

The male is more likely, for example, to be actively concerned with the political processes. Thus, the conservative male in a liberal setting is inclined to be confronted by beliefs that run contrary to his own central values and goals. These confrontations probably effect his inner sense of coherence and competence and are thus to some degree unsettling. In like fashion, it is not surprising, then, to find that females who appear to be less cultured (music, art, poetry) and less attractive in a cultured and socially competitive environment are inclined to withdraw. To be esthetically inclined and physically attractive are female roles.

Students of both sexes were more likely to be among the dropouts if they came from smaller communities. It would appear that the largeness of the environment effects them equally. What is not clear about this relationship is what other values these students from the smaller communities may tend to have in common.

Regarding the social presses, then, these data suggest that where the University tends to have relatively unique presses the corresponding social-psychological attributes of students differentiate between persisters and dropouts. Also these presses tend to differentiate between males and females in ways that appear to reflect anticipated variances in role expectations that may be in turn related to the socialization process.

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[1] It should be noted that we are not discussing types of dropouts here, rather the major presses of a college or university. The next chapter treats the development of types of college dropouts.

FIGURE 5. Summary of the findings

Press	Effect on Students? Male	Female	Effect
Social			
Largeness-size	Yes	Yes	Males and females from smaller communities tended to drop out.
Liberal	Yes	No	Males tended to drop out if conservative.
Esthetic-cultured	No	Yes	Females who were less esthetically or culturally inclined dropped out.
Secular-introspective	Yes	No	Males with stronger religious feelings tended to drop out.
Wealth	?	Yes	Females from less wealthy homes dropped out.
Academic			
Scholastic ability			Males and females with lower SAT scores were both more likely to be among the dropouts. This was found to be truer among lower scoring females on the test of verbal ability.
SAT-V	?	Yes	
SAT-M	Yes	Yes	
Omnibus Personality Inventory			
(RL) Religious Liberalism	Yes	No	The RL and ES scales support the finding reported as part of the social environment.
(ES) Estheticism	No	Yes	Less esthetically inclined females were more likely to be among the dropouts.
(CO) Complexity	No	No	No differences.
(IE) Impulse Expression	?	?	No clear difference.
(SM) Social Maturity	Yes	Yes	High SM scores are associated with stayins.
(TO) Theoretical Orientation	No	?	The TO and TI scores do not differentiate the males. However, there is a slight suggestion that among females low TO and low TI scores are more crucial.
(TI) Thinking Introversion	No	?	

Academic Press

The academic presses were also shown to differentiate between persisters and dropouts (see Figure 1). In this case, however, it was not anticipated that male and female roles would be related to the academic presses since the intellectual (course related) demands are probably similar for each sex.

The scores of the Verbal and Mathematics sections of the Scholastic Aptitude Test did differentiate between persisters and dropouts; higher scoring students tended to persist as expected. The notable feature seemed to be the greater SAT-V score difference between female dropouts and persisters.

At least two of the OPI scales (RL and ES) seem to measure what have been broadly defined as social presses. Both of these scales supported the results discussed earlier, i.e., more religious males and less esthetically inclined females tended to withdraw. Of the remaining scales three seem to be more closely related to intellectual orientations: Complexity (CO), Theoretical Orientation (TO) and Thinking Introversion (TI).

Since the University's liberal arts college was characterized as an institution that encourages complex theoretical and reflective thought, it was anticipated that low scores on the CO, TO and TI scales would be indicative of students who did not have the best intellectual orientation for the College. The scales, however, did not clearly differentiate between dropouts and persisters. There was no difference at all in the CO scale and the minor differences in the female sample on the TO and TI scales are felt to be relatively inconsequential. Thus, it is concluded that the students' cognitive styles (intellectual orientations), at least as measured by the OPI, do not suggest incongruence with the academic presses.

In Summary. There seems to be support in these data concerning notions about the possible effect of institutional presses. Also demonstrated was the sex-differentiated significance of these presses. The sex-differentiated results suggest that certain aspects of the interaction with the environment are more or less crucial depending upon one's sex.

These data also supported the presumption that the presses were of two broad categories (social and academic) and that students might be

incongruent with either or both of these major environmental presses. Not clearly supported by these results is the notion that certain cognitive styles are significant in a student's intellectual adaptation to academic presses.

Finally, it must be emphasized that the empirical findings reported and analyzed briefly in this chapter are regarded as highly tentative. While the apparent environmental influences and sex differences generally support the notions that guided the investigation, it is also obvious that many sources of variation--peers, family, other personality dimensions, and the types of dropouts--have not been subjected to examination. The next phase of the study was undertaken to refine our insights by looking into the many causes of dropping out.

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CHAPTER FIVE

DEVELOPING THE TYPOLOGY

University of Michigan

Raymond G. Hewitt and Robert G. Cope

The followup questionnaire (used in both the Michigan and Washington studies) was designed with two objectives in mind. First, it was to determine the reason or reasons for withdrawal. Since one of the basic concepts of this study is that of person-environment incongruence, it was desirable to distinguish between "discretionary" and "nondiscretionary" withdrawals. Nondiscretionary withdrawals were defined as largely involuntary withdrawals from the college that largely resulted from the influence of someone or something other than the student, e.g., "My mother was seriously ill and I went home to care for her," "I was offered a much better athletic scholarship at another college," "I withdrew to have a baby," and so on.

On the basis of responses to the question "What reason or reasons did you have for withdrawing from the University?" and confirmations on the twenty problem dimension scales (see Figure 6) it was possible to identify two groups of students who were excluded from most analysis. The first group was composed of students who had not actually withdrawn from the University. For example, coeds who married and enrolled under their married names were no longer easily identified on the lists of entering freshmen and were assumed to have withdrawn. Other groups of students had likewise not withdrawn; some were studying abroad on university-sponsored programs, had graduated early (in three years), or had gone to another institution because they had been admitted to the other institution's professional school (law or medicine) before completing their studies at the university.

The second group of students who were not eligible for the analysis sample was composed of students who apparently were not incongruent with the major presses of the environment. The nondiscretionary withdrawals, as defined earlier, were students 1) who had suffered some physical disability, e.g., blindness, automobile accident, football injury; in addition, this category includes women who were pregnant; 2) students who had to be at home or at least leave the University because a parent was

ill; 3) women who withdrew to be with a "loved one," e.g., "My husband had received a fellowship at the University of Chicago;" 4) students who withdrew because the parents wished it, e.g., "My parents insisted that I attend a smaller college closer to home;" and 5) other miscellaneous withdrawals such as a temporary withdrawal in order to study under a noted scholar at another institution, an unusual opportunity to travel in Europe, financial difficulties (surprisingly few) and so on.

These deletions were necessary to "clean up" these data. That is, it was necessary to be reasonably certain that the withdrawals from the University had in fact left for causes other than the "involuntary" type described above. Of course, it is recognized that the reasons some of these students gave for withdrawing may only be rationalizations. Thus, these reasons cannot be taken completely at "face value." It is assumed, however, that this group is largely composed of students for whom the University presses were not incongruent; therefore, the analysis was done on the responses of students who appear to have left the environment because of some lack of "fit."

The number of withdrawals in the study is compared to entering freshmen by cohort and sex in Table 10. Perhaps the most significant inference that can be made about these data is that a substantial proportion of the entering students seem to be lacking in some form of fit with the College. The 659 students in the group to be studied represented 15.08 percent of the entering classes (N=4368) at the University of Michigan.

The actual proportion lacking in fit is probably higher, but cannot be determined for a number of reasons. For example, the actual percentage could be substantially higher if we knew more about the "walking wounded," i.e., the students who despite social and academic difficulties are able to remain in the College or have transferred to another college within the University.

Moreover, students who did not return the followup questionnaire (N=211) were not included; if they were included, a larger proportion would be among the dropouts. Nor are any of the commuting students included in the Michigan study; presumably the environmental presses acting on them were different than the presses on the students in residence.

On the other hand, not all of the students who did drop out and who are in this analysis sample are clearly lacking in fit. Approximately a

TABLE 10

Analysis Sample as a Percentage of
Entering Freshmen by Cohort and Sex

	Cohort						
	Class of 1966			Class of 1967			
Sex	Enrolled	Analysis Sample*	Sample as a Percent of Enrolled	Enrolled	Analysis Sample*	Sample as a Percent of Enrolled	Sample Totals for Each Sex
Male	1,053	165	15.7	995	139	14.0	304
Female	1,154	176	15.3	1,166	179	15.4	355
Total	2,207	341	15.4	2,161	318	14.7	659

*These are only those students who are actually in the analysis sample. This sample does not include any nonrespondents, withdrawals who left for nondiscretionary reasons, or commuting students.

third of the withdrawals (N=217) left because of a wide variety of reasons that seemed neither clearly academic nor social, e.g., "I wanted to be closer to home" or "I was bored with college." These students may have withdrawn from any college regardless of press.

The second objective of the followup questionnaire was to distinguish among students who were incongruent with two of the major presses (social and academic). In order to do this, each respondent was asked to respond to 20 "problem dimension" statements.[1] The statements were in regard to the kinds of problems often experienced by college students. Each respondent rated the problem on a five-point scale (0 to 4) of how important each problem was for him while he was in attendance at the University.

The complete wording of the problem dimensions, grouped by type of problem, and a shortened version of the problem statements is illustrated in Figure 6. The shortened version is used to simplify discussion, e.g., "A feeling of being lost at the University because it is so big and impersonal" is shortened to "feeling lost--so big and impersonal."

RESULTS

The intercorrelations of the problem dimensions illustrated in Table 11 add support to the notion that students may find themselves in a disfunctional (lack of fit) relationship with one or more aspects of the environmental press.[2] What can be said about these data? Judging from the range of correlations (.00 to .71) it appears that the respondents were selective in how they responded to the problem dimensions. That is, they didn't respond as though all things were problems. As an example, a "family crisis like death or divorce" (Item 15) would not be expected to influence greatly the students' problems in most other areas included on

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[1]The questionnaire was reworded for the Washington phase of the study to tap reasons that seemed more important in the early 1970's.

[2]Correlations that are statistically significant (r=.115) at the one percent level of confidence are underlined while correlations for r=.33 or greater are circled. The correlations of r=.33 or higher were arbitrarily selected as a level of correlation above which it was felt "substantial" relationships were more evident. The one percent level of confidence was chosen to be more selective about demonstrating the correlations that are statistically significant than would be true at the five percent level. At the five percent level of confidence correlations of r=.088 or greater are significant.

FIGURE 6. Question on Problem Dimensions

Question: In the list below are some experiences or situations which students often describe as problems during the college years. For each situation, please consider how much of a problem it was for you.

Variable Number	Wording from Questionnaire	Shortened Phrase
1	A difficulty learning regular study habits--learning what to do during my time allotted for study	Difficulty learning study habits
2	A disappointment in rushing, not receiving a bid to the house I wanted to pledge	Disappointment in rushing
3	A discouragement because of being placed on academic probation	Placed on academic probation
4	A concern over earning too many "C's" and the doubt about my record being acceptable to a graduate school	Concern over too many "C's"
5	A fear of academic failure--not able to maintain a "C" average	Fear of academic failure
6	A disappointment in a relationship with the opposite sex--a hurt, loss, rejection	Disappointment with a relationship with the other sex
7	Disillusionment about friendship or a friend	Disillusionment about friendship
8	The difficulty of meeting students with very different standards than my own--ways to act, sexual standards, moral behavior	Difficulty with students who had different standards
9	A feeling that my religious beliefs were constantly being challenged and threatened	Religious beliefs were threatened
10	A questioning of my own religious faith or beliefs	Questioning my religious beliefs

Variable Number	Wording from Questionnaire	Shortened Phrase
11	A feeling of being "lost" at the University because it is so big and impersonal	Feeling lost--so big and impersonal
12	An inability to find individuals or groups which were really congenial and with which I felt happy	Not finding congenial groups
13	A shock in meeting people who seemed much more cosmopolitan or had been around more than I	Meeting more cosmopolitan students
14	A family financial crisis that affected my plans	Family financial crisis
15	A family crisis like death, divorce in the family	Family crisis
16	A difficulty accepting the "snob" appeal of most social groups on campus	Snobbish social groups
17	A problem with the police or disciplinary agents of the university	Disciplinary problems
18	A psychological problem or emotional upset	Emotional upset
19	An inability to express my interests and abilities--to express myself	Inability to express oneself
20	A disappointment in having too little contact with the faculty	Too little contact with faculty

the questionnaire. And it will be noted that only Item 14, "a family financial crisis...," is significantly related to this problem, as would be entirely expected.

As another example of selectivity in student response note the correlations with Item 20, "Seeing too few faculty." While the majority of items are statistically significant (underlined), Items 2, 6, 10, 14, 15, 16, 17, and 18 dealing with such problem areas as "fraternity rushing" (Item 2, r=.03),"a disappointment in a relationship with a member of the opposite sex" (Item 6, r=.07), "a family financial crisis..." (Item 14, r=.00), and "being emotionally upset..." (Item 18, r=.03) show no relationship. As we would expect these other problem dimensions should not be related to concerns regarding the amount of contact with the faculty. On the other hand "a feeling of being lost at the University" and "an inability to express my interests and abilities..." (Item 11, r=.40 and Item 19, r=.33) are more closely related to a "disappointment in having too little contact with the faculty."

More important perhaps than the apparent selectivity of response is the pattern of relationship that emerges from examining the correlations that are r=.33 or greater (circled). It will be recalled that items were selected for the followup questionnaire on their assumed ability to distinguish types (social, academic, etc.) of withdrawals. In this respect it is gratifying to note the almost complete absence of correlation between certain problem dimensions. For example, responses to Item 12, "An inability to find individuals or groups which were really congenial..." (a social problem), are not related to responses on Items 1, 3 or 5 (academic problems), correlation of -.02, -.02, and .01 respectively. This same lack of relationship exists between all of the academic and social problem dimensions. The lack of relationship is made clearer by the "cluster analysis" illustrated in Figure 7.[1]

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[1] The circles represent problem dimensions while the lines that join the circles indicate relationships. Solid lines represent correlations of r=.33 or more, while the broken lines include other less substantial relationships. The broken lines are included if the correlations among problem dimensions within a cluster or between clusters is r=.25 or greater.

TABLE 11

Intercorrelations Matrix of Mean Scores on the 20 Problem Dimensions

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Study Habits	(1)																			
Greek Rushin	(2)	-.01																		
Acad.Probati	(3)	(40)	-.01																	
Too Many C's	(4)	.23	.07	.25																
Acad.Failure	(5)	(46)	-.08	(71)	.28															
Opposite Sex	(6)	.22	.10	.10	.11	.13														
No Friendship	(7)	.07	.18	.06	.08	.04	(37)													
Moral Stand.	(8)	.05	.14	.01	.05	.04	.23	(33)												
Relig.Challe'd	(9)	.06	.07	.05	.13	.10	.16	.12	(40)											
Q.Own Beliefs	(10)	.06	.05	.03	.11	.02	.19	.11	.28	(56)										
Being Lost	(11)	.15	.01	.18	.10	.24	.17	.18	.27	.12	.08									
Not Rt.Groups	(12)	-.02	.13	-.02	.06	.01	.21	(36)	(41)	.14	.09	(50)								
Too Cosmopol.	(13)	.16	.13	.12	.12	.16	.27	.22	(40)	.22	.15	(34)	(37)							
Family Finan.	(14)	.03	-.03	.08	.14	.03	.09	.12	.02	-.00	.08	-.00	-.00	.06						
Family Crisis	(15)	.02	-.01	.10	.09	.05	.10	.08	.02	-.00	.05	.04	.03	.01	(34)					
Snob Groups	(16)	.00	.21	-.01	.06	-.01	.20	.25	(36)	.17	.14	.25	(45)	(35)	.07	-.01				
Disc. Probs.	(17)	.05	.03	.01	.02	.04	.02	.03	.06	.03	.01	-.03	-.00	.01	.04	.03	.02			
Emotional	(18)	.15	.02	.08	.04	.09	(35)	.23	.15	.01	.09	.18	.18	.16	.09	.22	.15	.09		
Express Self	(19)	.25	.07	.14	.10	.23	.29	.25	.28	.16	.17	.31	.31	.31	.05	.05	.27	.01	.32	
Few Faculty	(20)	.13	.03	.22	.19	.24	.07	.15	.15	.13	.06	(40)	.18	.17	.00	.04	.10	.06	.03	(33)

Note: Figures in the table are product-moment correlations. All correlations are positive unless otherwise indicated. (N=774)

Three clusters tend to emerge from these data. The largest cluster is made up of the four problem dimensions that were included in the followup questionnaire to distinguish the social withdrawals from other withdrawing students. Two other clusters of three problem dimensions each represent the academic and religious groups.

One problem dimension (Item 8) appears in two clusters. It seems that students having concerns regarding their "religious faiths" (Items 9 and 10) as well as those finding the environment "too cosmopolitan" and lacking in "congenial individuals and groups" were also likely to express difficulty in meeting students with different standards, i.e., "ways to act, sexual standards, moral behavior" (Item 8).

One problem dimension (Item 20), "A disappointment in having too little contact with the faculty," did not have a cluster to which it seemed to belong. This item is included in the diagram, however, because it is positively related (r=.40) to "a feeling of being lost at the University (Item 11).

It should also be noted that each cluster has at least one correlation of r=.50 or higher. These relatively high correlations seem to identify the "key" problem dimension around which the other related problem dimensions cluster and thus help complete the picture.

Another test to examine the presses acting upon the dropouts was performed; a principal-components analysis was performed on the data from the inter-correlation matrix. The principal-components analysis differs significantly from the more often cited factor analysis in that 1's are maintained along the main diagonal of the matrix in the former. This technique is particularly desirable when the initial factor structure of the matrix is desired as was the case here.

Based upon the popular convention of considering only those factors with a latent root greater than 1, seven factors emerged for further study. As Table 12 indicates, these seven factors account for 62 percent of the total variance; Table 13 illustrates the corresponding loadings for these seven factors. Looking at only those loadings greater than .50, it is possible to assign descriptive titles to these factors, as had been done in Figure 8.

Four significant factors emerged from this initial analysis: Social, accounting for 20 percent of the variation; Academic, which accounts with Social for about one-third of the total variation; Family, a new press,

FIGURE 7: Cluster Diagram of Selected Correlation from Table II

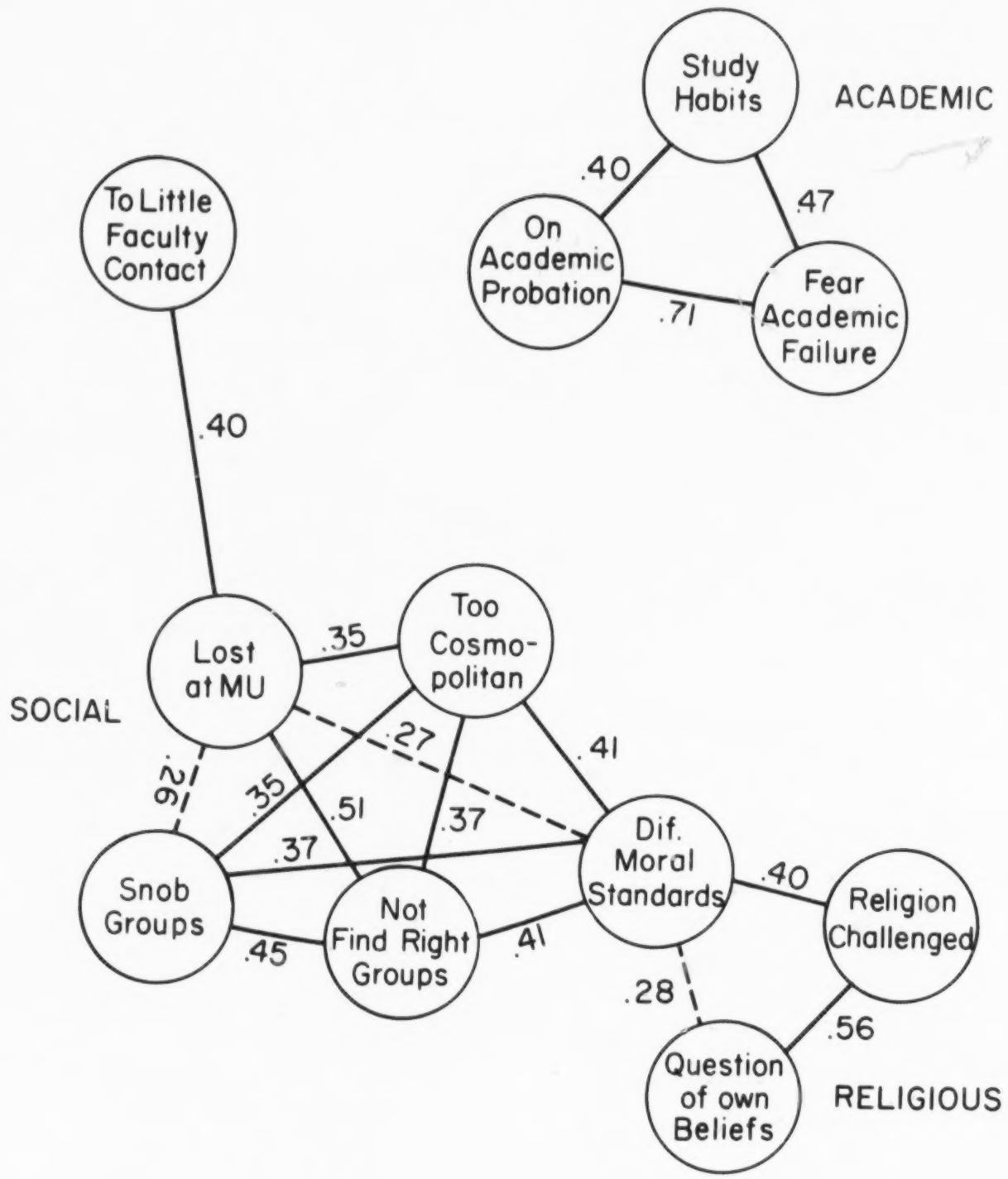

FIGURE 8. Principal Factor Loadings*

Variable	Factor I	II	III	IV	V	VI	VII
1	37	<u>57</u>	-2	4	-34	0	-4
2	20	-25	-1	0	-21	<u>72</u>	-2
3	35	<u>73</u>	-8	3	-1	13	-8
4	31	36	4	20	19	41	-7
5	40	<u>75</u>	-16	2	-5	2	-3
6	<u>53</u>	-4	32	0	-43	-9	-14
7	<u>52</u>	-22	23	-14	-16	16	-6
8	<u>61</u>	-36	-11	18	1	-1	6
9	43	-17	-18	<u>72</u>	6	-11	3
10	37	-16	1	<u>73</u>	2	-19	-3
11	<u>59</u>	2	-26	-33	31	-20	2
12	<u>60</u>	-38	-13	-32	18	0	-3
13	<u>62</u>	-13	-12	-6	0	6	-9
14	15	10	<u>63</u>	10	44	14	-7
15	15	13	<u>67</u>	1	39	-5	0
16	<u>52</u>	-38	-5	-13	4	22	-6
17	7	3	14	5	-13	14	<u>93</u>
18	41	0	47	-20	-31	-32	8
19	<u>63</u>	4	-1	-15	-10	-23	5
20	44	21	-28	-14	37	-4	27

* Loadings greater than .50 are underlined. The decimal points have been dropped.

TABLE 12

Latent Roots for the Principal-Component Analysis

Factor	Latent Root	Cumulative % Trace
I	3.97	19.87
II	2.21	30.94
III	1.50	38.43
IV	1.46	45.75
V	1.15	51.48
VI	1.08	56.87
VII	1.01	61.94

TABLE 13

The Principal Factors*

Factor I--SOCIAL

19	Inability to express oneself
13	Meeting more cosmopolitan students
8	Difficulty with students who had different standards
12	Not finding congenial groups
11	Feeling lost--so big and impersonal
6	Disappointment with a relationship with the other sex
16	Snobbish social groups
7	Disillusionment about a friendship

Factor II--ACADEMIC

5	Fear of academic failure
3	Placed on academic probation
1	Difficulty learning study habits

Factor III--FAMILY

14	Family financial crisis
15	Family crisis

Factor IV--RELIGION

10	Questioning my religious beliefs
9	Religious beliefs were questioned

Factor V--_____**

Factor VI--GREEK

2	Disappointment in rushing

Factor VII--DISCIPLINE

17	Disciplinary problems

* Variables with loadings greater than .50 are listed in descending order of loading and a descriptive name is given to each factor.

** No variable had a loading greater than .50

and Religion. The fifth factor lacks definition but appears to be closely related to the Family factor. Perhaps a rotation (see below) would shed further light on this press. The Greek and Discipline factors also appear to cause some lack of "fit."

As usually occurs when a principal-components analysis is performed, we have only narrowed down the number of variables for future study. As these factors tended to support our initial conclusions, no further analysis was undertaken.

CONCLUSION

Although an effort has been made to identify certain types of dropouts--types that seem to have relevance to environmental presses--the numbers or proportions, especially in the subgroups, can only be considered rough approximations. This rough categorization is a result of the limitations imposed through the definitions employed and the necessity to rely on the students' responses. Nevertheless, as rough as this categorization may be, it does seem to present an alternative to considering all students as just dropouts. And as Skaling suggested in Chapter 3, this is one approach to theory building where much of the existing knowledge has not been systematized.

As far as theory is concerned our conceptual approach has observed the process of selection in at least two ways: selective expulsion from and self-selection out of the institution. In terms of self-selection out or selective expulsion it seems that these means of selection may operate differently depending upon the press and personality trait being considered. For example, in an institution of higher education there is an academic press--ability continuum. The academic press may mean there will be both selective expulsion (academic dismissal) and self-selection out ("I had better transfer somewhere else where it is easier, where I can handle the work"). However, even at the high end of the academic continuum, when the student has more than enough ability, there may only be self-selection out of the institution. When considering, for another example, a social press like "cosmopolitaness" the students who are not congruent at either end of the continuum may elect to leave the institution (self-selection out) but for different reasons. Those students who are less cosmopolitan (i.e., more provincial, less worldly) may tend to find the social environment (and academic) threatening, overwhelming and otherwise unsettling. The

most cosmopolitan student may, however, find that he is not challenged or stimulated in this setting and will likewise leave. Thus, while incongruence may be present, the nature of the behavior and the type of mechanism for selection differs depending upon the press and personality trait under consideration.

Again, the pattern of responses suggests the existence of groups of students having problems that distinguish themselves along academic, social, religious, family, and perhaps other lines. The higher relationships within the academic problem dimensions as compared to the lower relationships between the academic cluster and the social or religious cluster suggest that these may be separate problem areas for different individuals. This evidence, thus, appears to support one of the major hypotheses of this investigation, i.e., there are major presses within the environment of institutions that confront students. Two of the major presses are social and academic and two of the dropout types are social and academic.

A typology, while it necessarily oversimplifies human reality represents a conceptual contrivance that is explored more fully in the next chapter to lead to new understandings of that same reality. The next phase of our analysis was to identify the entrance characteristics of students likely to have, for example, social difficulties, but not academic.

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CHAPTER SIX

ENTRANCE CHARACTERISTICS OF THE TYPES OF DROPOUTS

University of Michigan

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In order to identify entrance characteristics which might be related to the eventual type of problem experienced by the dropout the reasons given for withdrawal were examined and compared with the problem dimensions. For example the student expressing this reason for dropping out, "The University seemed to be too large and impersonal so I enrolled at Carleton College," and marked "crucially" or "very important" to several of the socially relevant problem dimensions, was tentatively grouped among those labeled "social dropouts." The individuals in this group were then re-examined to determine if there were other reasons for withdrawal. If none were found, then the case was finally placed in the social dropout category.

In cases where social reasons were given for withdrawal, but there were also academic complications the student was placed in a category "social-academic withdrawal." Likewise, when academic reasons were given for withdrawal, e.g., "I was not making good grades," and the student expressed concern with some of the social presses, he too was identified as a social-academic withdrawal.

It should be mentioned that there is a certain arbitrary rationale in the selection of specific items labeled, for "academic problem dimensions." It could be argued that a problem dimension such as, "a disappointment in having too little contact with the faculty," is also an academic matter. If one wishes to accept the broadest definition of "academic" then perhaps every one of the problem dimensions is academic. However, in the investigation we attempted to maintain a somewhat conservative definition of these terms throughout. By doing this conservatively it is hoped that we formed groups that had a minimum of overlap.

The Academic Dropouts (W_a)

The largest group of respondents within the withdrawal sample includes those students who were having academic difficulties. These students left because of academic failure or because of fear of academic failure. They gave reasons such as these for withdrawals:

I found myself unequipped to meet the demands for study and concentration at the University and couldn't keep up my grades.

There was too much academic pressure generated by the students themselves and I found I couldn't do my best work under such tension.

My grades were terribly low and I was asked to leave the University. (I had no social problems--I met nice people, dated often, played Frosh football, joined a fraternity--I just could not catch on to college studying and work.)

Unfortunately for me, I was asked to withdraw because of serious academic failure.

I was most disappointed with my grades.

Low grades and an inability to get regular study habits.

The Social Dropouts (W_S)

The students leaving for reasons that were clearly social typically expressed themselves in these ways:

It was very different from my high school where I knew everyone. It's bigness and cold attitude was disheartening and disappointing to me, although my grades were satisfactory.

I felt lost among the multitudes, never really fitting in or finding satisfactory friendship among students or faculty. I also had difficulty concentrating on studies because of my depression. I didn't think it worthwhile to continue with this attitude and state of mind. I also at the time had no goal.

I felt completely lost at Michigan and desired a smaller campus where meeting other students was less of a problem.

I was very homesick and overwhelmed by the impersonal atmosphere, as well as the diversity of characters I came in contact with. I also had no idea of how to study, thought that if I was smart enough to have been accepted, I could glide by without studying as I had done in high school. I felt as if no one cared if I flunked out or not.

Classes were too big, I never knew any professors personally, no one ever spoke to others, I found it extremely difficult to meet other people. In short, I felt alienated both from my fellow students and my teachers.

The Other Withdrawal Subgroups

Two additional withdrawal subgroups were identified by responses to problem area statements. A religious group was identified by high scores

on two scales: 1) a feeling that my religious beliefs were constantly being challenged and threatened; 2) a questioning of my own religious faith or beliefs.

Students expressing concerns regarding their religious faith were included in this subgroup if they responded at the "crucially" or "very important" level to either of the above problem statements, or by responding to both statements at the level of a "fairly important" problem. A separate analysis was not conducted to determine their entrance characteristics, because no student left solely for religious reasons; in every case these students were also found to be having academic and/or social problems as well.

A final subgroup, identified as the "intellective-cosmopolitans" were students who left the University because they found the "intellectual and social climate stifling," "not intellectually challenging" and so on. They gave these impressions in response to Question 3. These students, while expressing concerns that indicate incompatibility with the environment, appeared to be polar opposites to the social and academic dropouts. Their number is probably understated because there were no problem dimensions to measure dissatisfaction with the self-selection out of the University at the "high" end of the continuum. Their reasons for withdrawal were:

> Little intellectual activity at the University undergraduate school. Ossification of values of most students. Whole University permeated with vocational-vulgar-pragmatic attitude toward education. (From my point of view at that time.)
>
> I couldn't see any reason to attend the University other than the degree; there was no intellectual stimulation; most of the students had the same socioeconomic background.
>
> I didn't like the Midwest. My courses weren't as stimulating as I'd hoped. The students were mostly self-satisfied, middle class conformists with narrow minds. Generally, I wasn't happy with the people.
>
> I didn't find the University intellectually stimulating or challenging so I enrolled in what I hoped would be a more exciting university.
>
> I missed the variety of experiences and people that New York offers; I found that a huge university in a small town offered little respite from a "school conscious" atmosphere.

> After two years the "campus life" was a meaningless and boring one and my little world a very narrow and unreal world. I wanted a city school where I would not have as much pressure to play "undergraduate co-ed" so I transferred to University of Penn.
>
> I'm afraid that I found my year at the University rather dry and sterile. The problem is multi-dimensional but I think that the place to start is with the undergraduate student body. Generally, I found my fellow students either incapable or not interested in carrying discussions from the classroom back to the dorm.

Miscellaneous Problem Dimensions

Ten other problem dimensions were included in the followup questionnaire for a variety of other purposes. Items 14, 15, 17 and 18 were included to help identify those students leaving because of difficulties that would not appear to be environment related. For example, family matters like loss of finances (Item 14) or death (Item 15).

Item 18 was poorly worded: "A physical disability, psychological problem or emotional upset." This item (18) was meant to determine cases of a physical handicap or a severe psychological problem ("nervous breakdown") that required withdrawal. However, an "emotional upset" could have resulted from a wide range of milder unsatisfactory experiences, such as a broken friendship, a fraternity rejection, or academic failures.

Fortunately, the respondent often helped clarify the meaning of his response. He or she did this by crossing out or circling the word that best described his or her problem, e.g., a person suffering a physical disability might cross out "psychological" or "emotional." Most of the time, however, the respondent would cross out "physical" in which case it was felt that the data was usable, and the response was thus considered a psychological or emotional upset. When the meaning of the response to Item 18 was not clear, i.e., there was no evidence suggesting whether the problem was physical or emotional, the response was not coded for analysis.[1]

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[1] It was interesting to note that "emotional upset" was virtually uncorrelated with academic problems (in Table 11 r's of .15, .08, and .09) but was most highly correlated with Items 6 (r=.35) and 7 (r=.23), a "disappointment with a relationship with the other sex" and a "disillusionment about a friendship," respectively.

Item 2 "a disappointment in rushing" was included because it seemed desirable to know if many students left the University because of disappointments with the "Greeks." Their responses indicated that this is a problem of negligible proportions among dropouts.

Item 4 was meant to distinguish between actual academic failure and cases where a student was doing satisfactory academic work but felt he would not get into a good graduate school unless he, for example, "went elsewhere to earn a higher grade point average."

Items 14 and 15 while they are "social" problems are different than Items 11, 12, 13 and 16. The former deal with two-person groups, whereas the latter are more relevant to the larger, more generalized, other campus social groups. On one level we are asking about a friendship (Items 14 and 15); in the other items (11, 12, 13 and 16) the subject is the University as a whole or groups within the University community.

Item 20 was included to determine the degree of concern withdrawal students had relative to contact with the faculty. This item was included on the questionnaire to measure the anticipated concern students might have in the large university setting with seeing too few senior faculty in the underclass years. The item was not listed near either the academic or social problem dimensions because it was not clear how students might feel about this concern relative to either their social or academic problems. The relationship of this item to the other items was discussed in the previous chapter.

Table 14 presents a list of the subgroups and the number by sex in each group. As experience would suggest, the largest subgroup is the Academic (N=312), followed in number by the Social (N=154), Social-Academic (N=67), Religious (N=67), and Intellective-Cosmopolitan (N=25). Approximately a third of the sample (N=217) is not included in any specific subgroup. This third is made up of students who did not clearly indicate any strong concern with either the social or academic presses of the College and did not qualify for the Religious or Intellective-Cosmopolitan subgroups.

This group of students withdrew from the College and, in response to Question 3, gave reasons such as "I wanted to go to school closer to home," "I was tired of going to school and felt I could learn something by getting an apartment and working," "Personal family problems and a desire for a change of environment," "I was disturbed at the realization

that grades made little difference to me, and with doing so well with little effort--making a game out of school," "I was not happy with so many teaching fellows," and so on.

Furthermore, these same students did not express important concerns regarding the problem dimensions. A large proportion of these students were also those who gave reasons such as "I was not ready for college yet," "I needed time to grow up," "I was not motivated enough." With this evidence, it was difficult to justify including them in any of the subgroups. It is probably that this group would be substantially smaller if the other dropout subsamples had not been selected on clear indication of incongruence.

It can be seen in Table 14 that there are more females in the Social and Religious subgroups than males, while males are more likely to be among those of the Academic subgroup. In view of commonly held views about the usual concerns of females their occurrence in these groups is not surprising. And in view of past research on academic prediction (Lavin, 1965) the proportion of males in the Academic subgroup is expected.

What may not be clear from examining these data in Table 14 is that some of the dropouts may be listed in more than one sample. For example, a student may have left the University because he felt "lost" and could not seem to make friends. This student would be classified as a Social Dropout. If this same student expressed concerns about his religious faith he may also be listed among the Religious Dropouts. And finally, if he were having academic difficulties as well, he would be listed as an Academic Dropout and, thus, be listed in four of the samples: Academic, Social, Social-Academic and Religious. This example is atypical; the majority of students were in one or two of the samples. For the analysis which follows only students clearly fitting a single subgroup are used.

Two additional comments seem to be in order before concluding this discussion of the dropout sample and its subsamples. First, although an effort has been made to identify certain types of dropouts--types that seem to have relevance to environmental presses--the numbers or proportions, especially in the subsamples, can only be considered rough approximations. This rough categorization is a result of the limitations imposed through the definitions employed and the necessity to rely on the students' responses. Nevertheless, as rough as this categorization may be, it does seem to present an alternative to considering all students

TABLE 14

Number of Withdrawals by Subsample and Sex

		Sex	
Subgroup	N	M	F
Social	154	30*	57*
Academic	312	130*	115*
Social-Academic	67	38	29
Intellect-Cosmopolitan	25	10	15
Religious	67	28	39
Not in any	217	88	129

* Number as related to respondents that are clearly only in one group.

as just dropouts. As will be seen these categories of dropouts helped us better understand what was happening as these students interacted with the institutions' environmental presses.

Persisters or Stayins

In order to differentiate the characteristics of students who later withdrew from the characteristics of students who persisted a "stayin" (or persister) sample was selected. The persisters are the students who entered the College as first time freshmen in the 1962-63 and 1963-64 academic years and who were still enrolled in the fall of 1965. The persister sample differs from the withdrawal sample in one respect. All the persisters lived in eight resident "houses" in dormitories. The eight houses (four men's and four women's) were randomly selected within each dormitory. The withdrawals on the other hand came from the same dormitories but may have lived in any of the houses. In so far as the stayin houses are representative of the dormitories this should not introduce any bias in the sample. There was no reason to believe that any of the houses were not typical of houses within any of the dormitories.

This procedure resulted in obtaining a persister sample made up of 351 males and 398 females. This compares to a withdrawal sample of 304 males and 355 females. The persister sample for males and females was in each case 11.7 percent of the total admitted for each sex in the fall terms of 1962 and 1963.

Up to this point the discussion and illustrations have primarily dealt with the concepts employed and the means by which this investigation was accomplished. A short summary seems in order before presenting the findings relative to the presses, dropout types, and independent variables.

Summary of Method and Measures

A list of 1,387 probable withdrawals was compiled from University records. Students coming at mid-year and local residents, among others, were eliminated from the list. The first mailing went to 1,131 probable withdrawals. About 80 percent (N=835) of the probable withdrawals responded. Out of the 835 respondents, 659 (about 15 percent of the entering classes) were included in the study after eliminations were made for early graduates, students abroad, involuntary withdrawals, and unusable responses. The remaining 659 respondents were grouped by type of withdrawal on the basis of their reason for withdrawal and their response to the problem dimensions.

A sample of persisters (N=749) was selected from among all stayins so contrasts with the dropouts could be made on the independent variables. The general comparisons of entrance characteristics between dropouts and stayins was presented in Chapter 4. We now turn our attention to a refinement of those data.

A Note on Hypothesis Testing

Before attempting to draw meaning from these results we wish to emphasize that our inquiry was exploration, rather than a definitive test of a priori hypotheses. We have attempted to explore several relatively new approaches to reach an understanding of the college dropout. In the process of examining our results we have also tried to extract new concepts. Thus, the exploratory qualities of the study led us to the conclusion that some readers may find disappointing: we did not feel compelled to subject our findings to a careful discussion of and reference to statistical tests of significance.[1] We relied upon judgment to draw inferences among observed differences in our analytical categories, even when such differences were small and often not statistically significant. We hope that in exploring a problem in a new way our inferences may lead to the formulation of hypotheses that may be treated statistically in forthcoming research.

Discussion of Findings: Internal Personality Orientations

The latter part of this section presents the relationship of certain background characteristics and personality orientations that are discussed in relation to the atmosphere and press at the University of Michigan. In this section we will be concerned with more general predispositions to become a type of dropout which are less related to a particular press, but which would be expected to relate to attrition in a wide variety of institutional settings.

Competence and Self Esteem

Since the issue of competence is particularly relevant in an academically competitive setting, we were concerned with the students' attitudes and self-concepts in this area. Several self-concept items from Question 55 (See Appendix A) were loaded heavily on this factor: confident/anxious;

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[1]We have, however, usually included the Chi-square ratio for the readers' benefit.

competent/not too competent; successful/not too successful; rely on own opinions/rely on others' opinions.

Other indications of attitudes in the competence and adequacy area came from a multi-part question (#50) in which the student was asked to indicate the extent to which each of these had been a matter of concern to him in recent years. These latter items attempt to measure a number of identity issues that are recently viewed by Chickering (1969) and others as particularly critical in the years of post-adolescence: concerns about self-development and adequacy for one's future adult role.

The relationships between attrition and the attitudes dealing directly with self-confidence and self-esteem are presented in Table 15. These data were selected from scales in a seven-point semantic differential format which were presented to the student for his self-ratings (Question 55).[1] A factor analysis indicated that these items loaded heavily on one factor and, thus, appear to be measuring a unitary personality dimension. Other indices of self-competence and adequacy are discussed later.

These tables indicate among men rather clear and consistent relationships. The male dropouts are consistently lower in their feelings of competence and self-esteem and this is particularly true for the W_s; for example the W_s are the most "anxious," were most likely to feel "Not-too-competent," and most likely to feel "Dependent on others."

In contrast, the women students do not show any consistent or striking relationships across these tables. In fact, on individual items the female dropout indicated she felt more competent and more successful than the persister.

Concluding Remarks - Competence

The differences found between men and women students is not surprising, given the cultural expectations for men and women in our society. Since competence and effectiveness are more central to the masculine role, any lack in this personality dimension would be more relevant for the performances of men.

This finding shows a consistency with the findings of other dropout studies when the reasons for dropping out for men and women were compared

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[1] In order to increase cell frequencies these data were collapsed, giving only the polar objectives.

TABLE 15

QUESTION: Now we would like you to think about yourself and how you would describe yourself as a person.

SCALE: Rating Myself As A Person

(All Figures In Percentages)

MALE
df=2

	Anxious/Confident		Not Too Competent/Competent		Not Too Successful/Successful		Dependent On Others	Others Dependent On Me
Persister	38.3	61.7	73.6	26.4	66.0	34.0	35.4	64.6
W_a	50.0	50.0	65.8	34.2	60.7	39.3	36.8	63.2
W_s	75.0	25.0	62.5	37.5	70.8	29.2	50.0	50.0
	N=486	X^2=13.11	N=486	X^2=3.89	N=488	X^2=1.46	N=326	X^2=1.63

FEMALE
df=2

Persister	47.1	52.9	68.9	31.1	66.7	33.3	48.5	51.5
W_a	47.8	52.2	59.6	40.4	61.9	38.1	39.5	60.5
W_s	65.2	34.8	61.5	38.5	65.4	34.6	62.8	37.2
	N=482	X^2=5.30	N=545	X^2=4.63	N=544	X^2=1.09	N=387	X^2=6.19

(Astin, 1964; Iffert, 1958; Suczek and Alfert, 1966). These studies have consistently reported that men more often than women give "internal reasons" for dropping out: poor grades, loss of interest, no direction in life, and so on. Women, on the other hand, tend to give "external reasons" for withdrawal: getting married, inadequate finances, taking a job, and so on. In a speculative vein it is suggested, then, that dropping out for men may have greater implications of failure and, thus, bring about tendencies toward self-blame.

Expectations: Social Orientations

The student's expectations toward college were expected to be related to his or her success. Conceptually, we were interested in examining in what ways the types of dropouts had their expectations satisfied or frustrated by their experience. One of the major dimensions of almost any campus environment is a social press: the degree to which one finds others to be congenial, friendly, supportive, among members of the same sex and heterosexually. There were a number of questions that tapped the need for friendships and cordial relations, i.e., a social orientation. The questions and responses are illustrated in Tables 16 and 17.

Before these data were examined using the dropout typology no differences were found between the persisters and dropouts on the "friendship questions," so it was gratifying to find the consistency of direction that became evident in these tables.

The most obvious indication among both male and female W_s is that they were more concerned at the time they entered about friendships and social success than either the persisting student or the W_a. Another obvious and equally consistent relationship is that the W_a was the least concerned with or apparently interested in friendships and social relations.

Not so obvious, and perhaps more important, is the relationship of the persister to either of the types of dropouts. The persister is in the middle. Thus, any analysis that did not identify the reasons for withdrawal, but merely lumped dropouts together, obscured the fact that this series of questions does distinguish among subgroups.

Not unrelated to success socially and friendships, especially on the heterosexual dimension, is a person's attractiveness. On a self-descriptive item "Handsome/Plain," it was found that less attractive women were strikingly over-represented among dropouts, particularly the social dropout, whereas this item was unrelated to dropping out among men (see Table 18).

TABLE 16

QUESTION: In the list below are some of the problems...

ITEM: About Friends And Social Success

(All Figures In Percentages)

MALE
df=6

	Getting along with members of the opposite sex--will I be able to hold the interest of boys (girls) I like.				Sexual standards--deciding what my own standards are or should be.			
	Concerned				Concerned			
	Very	Somewhat	A Little	Not At All	Very	Somewhat	A Little	Not At All
Persister	17.8	32.6	31.8	17.8	8.5	20.5	34.5	36.5
W_a	11.1	37.7	33.3	17.9	6.9	21.6	40.5	31.0
W_s	37.5	29.2	25.0	8.3	16.7	8.3	45.8	29.2
		N=484	X^2=10.65			N=482	X^2=6.75	
				FEMALE df=6				
Persister	26.1	35.9	24.8	13.2	16.0	22.0	33.1	28.9
W_a	18.9	31.1	26.4	23.6	13.3	21.0	21.0	44.7
W_s	37.3	33.3	19.6	9.8	22.0	30.0	26.0	22.0
		N=544	X^2=12.51			N=542	X^2=15.72	

TABLE 17

QUESTION: In the list below are some of the problems...

ITEM: About Love And Marriage

(All Figures In Percentages)

MALE
df=6

	Whether I will get married--find someone I love and want to marry who wants to marry me.				Whether I can have a happy and stable marriage.			
	Concerned				Concerned			
	Very	Somewhat	A Little	Not At All	Very	Somewhat	A Little	Not At All
Persister	15.2	24.2	35.9	24.7	21.0	23.6	30.6	24.8
W_a	18.0	25.6	28.2	28.2	25.6	25.6	30.8	18.0
W_s	25.0	16.7	33.3	25.0	29.2	25.0	25.0	20.8
		N=484	X^2=3.87			N=484	X^2=3.87	
				FEMALE df=6				
Persister	30.8	29.7	26.6	12.9	35.7	24.5	27.1	12.7
W_a	18.9	29.2	27.4	24.5	23.8	28.6	24.8	22.8
W_s	39.2	21.6	27.5	11.7	51.0	21.6	11.8	15.6
		N=544	X^2=14.69			N=543	X^2=17.92	

Table 17 continued...

TABLE 17 (Continued)

QUESTION: In the list below are some of the problems...

ITEM: About Love And Marriage

(All Figures In Percentages)

MALE
df=6

	Whether anyone could love me enough to want to marry me.				Whether I am capable of consistent and continuing love for one person.			
	Concerned				Concerned			
	Very	Somewhat	A Little	Not At All	Very	Somewhat	A Little	Not At All
Persister	10.2	18.7	32.1	39.0	17.6	23.6	30.9	27.9
W_a	9.5	18.1	34.5	37.9	20.0	21.7	28.7	29.6
W_s	12.5	12.5	33.3	41.7	20.8	25.0	29.2	25.0
		N=483	X^2=.966			N=479	X^2=.48	
				FEMALE df=6				
Persister	15.0	20.9	29.5	34.6	23.5	21.2	26.9	28.4
W_a	11.4	28.6	21.9	38.1	14.2	24.5	24.5	36.8
W_s	23.5	21.6	31.4	23.5	30.0	26.0	30.0	14.0
		N=543	X^2=9.77			N=543	X^2=11.95	

TABLE 18

QUESTION: Now we would like you to think about yourself and how you would describe yourself as a person.

SCALE: Handsome - Plain

(All Figures In Percentages)

	MALE df=2		FEMALE df=2	
	Handsome	Plain	Handsome	Plain
Persister	80.4	19.6	73.8	26.2
W_a	87.6	12.4	57.5	42.5
W_s	73.7	26.3	53.5	46.5
	N=422	X^2=3.38	N=473	X^2=13.72

Adequacy About School and Work

Another conceptual area that was explored dealt with the student's feeling of adequacy in the sense of academic adequacy and world success. Table 19 illustrates items of concern over whether the student will succeed in the world, make the grade in college and be an outstanding student.

Like the previous series of questions dealing with concepts of competence and adequacy (see pages 125-26) the male dropout distinguishes himself from the persisters because of his greater concern for proving himself adequate, while the issue does not seem important among the women.[1] Among men those who expressed more concern at entrance were more likely to be among the dropouts; however, among women sometimes the least concerned were over-represented among the dropouts (particularly the W_a).

One item tends to stand out as a clear indicator of the student likely to have academic difficulties. This is the male who questions "Can I make the grade in college?" This suggests that the best questions we can ask are probably the most direct (see Table 19).

Adequacy About Social Relations

Another dimension of adequacy involves the student's concern about social popularity. Items related to this dimension of adequacy were related to whether or not the student will make friends and will be popular. These results are illustrated in Table 20. These items are a little different than those discussed regarding friendships and social relations on page 125; the earlier items dealt with expectations, while these deal more directly with a person's sense of adequacy to make friends and to become popular.

These data indicate that the W_s is a person who, regardless of sex, feels less adequate in social relations, has greater self-doubts about his or her ability to become accepted. Conversely, the W_a is the least concerned; these students especially among females seem to be virtually unconcerned about the social dimension of collegiate life.

Social Expectations Toward College and Life

We were also interested in examining the student's expectations along several social dimensions that differed from one another and those already discussed. The several social dimensions were determined by correlational

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[1] Horner (1969) suggests that female college students are anxious about achieving too much success because of the belief that academic accomplishments may lead to loss of femininity.

TABLE 19

QUESTION: In the list below are some of the problems...

ITEM: About Work And School Work

(All Figures In Percentages)

MALE
df=6

Deciding on a vacation--will I be able to find any work that will really interest me for my whole life.

	Concerned				
	Very	Somewhat	A Little	Not At All	
Persister	46.9	23.9	16.9	12.3	
W_a	49.6	24.8	14.5	11.1	
W_s	62.5	16.7	12.5	8.3	
		N=484	X^2=2.42		

Do I have what it takes to succeed in the world

	Concerned			
	Very	Somewhat	A Little	Not At All
Persister	31.3	32.2	21.0	15.5
W_a	40.2	45.3	9.4	5.1
W_s	33.3	29.2	29.2	8.3
		N=483	X^2=22.22	

FEMALE
df=6

Persister	45.1	32.6	14.2	8.1
W_a	36.8	32.1	16.0	15.1
W_s	52.9	23.6	13.7	9.8
		N=543	X^2=8.15	

Persister	31.6	35.8	20.7	11.9
W_a	28.3	44.3	17.9	9.5
W_s	51.0	27.5	19.5	2.0
		N=543	X^2=13.58	

Table 19 continued...

TABLE 19 (Continued)

QUESTION: In the list below are some of the problems...

ITEM: About Work And School Work

(All Figures In Percentages)

MALE
df=6

School--can I make the grade in college.

	Concerned			
	Very	Somewhat	A Little	Not At All
Persister	31.0	33.0	24.3	11.7
W_a	51.3	29.1	13.7	5.9
W_s	25.0	37.5	25.0	12.5

N=483 X^2=18.84

Success in school--will I be an outstanding student, recognized and rewarded for outstanding work.

	Concerned			
	Very	Somewhat	A Little	Not At All
Persister	18.1	36.8	33.3	11.8
W_a	21.6	36.2	24.1	18.1
W_s	16.7	29.2	45.8	8.3

N=482 X^2=8.19

FEMALE
df=6

Persister	43.2	27.3	20.2	9.3
W_a	54.7	23.6	16.0	5.7
W_s	49.0	31.4	9.8	9.8

N=544 X^2=7.62

Persister	20.3	37.2	28.9	13.6
W_a	18.9	48.1	21.7	11.3
W_s	23.5	37.3	25.5	13.7

N=541 X^2=4.87

TABLE 20

QUESTION: In the list below are some of the problems...

ITEM: About Friends And Social Success

(All Figures In Percentages)

MALE
df=6

Will I be able to make friends in college.

	Concerned			
	Very	Somewhat	A Little	Not At All
Persister	13.2	30.1	29.8	26.9
W_a	12.0	29.1	30.7	28.2
W_s	29.2	20.8	33.3	16.7

N=483 X^2=6.28

Popularity--will I be socially successful in college, be accepted by the groups I want to get into.

	Concerned			
	Very	Somewhat	A Little	Not At All
Persister	11.7	30.0	33.5	24.8
W_a	7.8	34.5	38.0	19.7
W_s	16.7	37.4	29.2	16.7

N=483 X^2=4.83

FEMALE
df=6

Persister	24.0	30.5	27.6	17.9
W_a	17.9	30.2	26.4	25.5
W_s	33.3	41.2	15.7	9.8

N=544 X^2=12.51

Persister	19.4	34.4	33.3	12.9
W_a	12.3	33.0	33.0	21.7
W_s	19.6	58.9	17.6	3.9

N=544 X^2=22.30

analysis; certain items tended to intercorrelate and suggest somewhat different social orientations. One of these dimensions consisted of the question illustrated in Table 21. These items seemed to represent a generalized social orientation toward college and life. A second social dimension was related specifically to why the student decided to go specifically to the University of Michigan: "Rewarding social life on campus" and "coeducational college."

The data in Table 21 suggest that when the student places in a general sense an important degree of expectation on a rewarding campus social life, without self doubts about adequacy, then he or she is more likely to be among the persisters. Knowing this would appear to be a useful refinement to the other questions dealing with friendships, which had suggested a relationship between friendship seeking and eventual withdrawal for social reasons.

The items (see Table 22) relating directly to the choice of the University of Michigan do not add any insights; these data do, however, reinforce conclusions drawn from other data dealing with the social dimensions: the academic withdrawal is less interested in friendships and the persisting student sees opportunity in a positive sense in the campus social life.

Sociability of the Student

While the student's expectations regarding social life on campus would be expected to condition his reaction to what he finds, it also seems important to know something about the sociability of the student. A number of adjectives from the self-rating scale (Question 55) tend to be related to a person's "social outgoingness:" Social/Solitary, Free/Constrained, Closed/Open, Happy/Unhappy, Active/Quiet, and Warm/Cold. Data in relation to these adjectives are illustrated in Tables 23 and 24.

Although the extent of differences are not great, at least interesting from a speculative point of view, are several results. For example, this word picture develops as one looks for characteristics for the female academic dropout: she is social, free, open, happy, active, and warm (see Table 24). It looks like she was simply likely to be there for an enjoyable experience; however, the enjoyable experience may not be consistent with earning good grades in a competitive environment.

The W_s among females tends to present a very different image of the person; she is more aptly described as: solitary, constrained, closed,

TABLE 21

QUESTION: People have different ideas about what they look forward to in college, or what they hope to achieve there. Please indicate how important each of the following ideas is to you.

(All Figures In Percentages)

MALE
df=4

	Having fun, enjoying the last period before assuming adult responsibilities.			Establishing meaningful friendships.		
	Importance			Importance		
	Great	Moderate	Little Or No	Great	Moderate	Little Or No
Persister	10.1	60.1	29.8	35.7	59.4	4.9
W_a	5.1	60.7	34.2	37.6	60.7	1.7
W_s	8.3	58.4	33.3	41.7	54.2	4.1
		N=489	X^2=2.93		N=488	X^2=2.44

FEMALE
df=4

Persister	22.2	60.1	17.7	52.5	44.4	3.1
W_a	9.4	74.5	16.1	47.6	50.5	1.9
W_s	15.4	69.2	15.4	38.5	59.6	1.9
		N=554	X^2=10.53		N=551	X^2=4.96

TABLE 22

QUESTION: Below are some reasons which may be important in deciding which college or university to go to. Go through the list quickly and check each one that was important to you in selecting Michigan.

(All Figures In Percentages)

MALE
df=2

	Co-educational college.		Rewarding social life on campus.	
	Checked	Not Checked	Checked	Not Checked
Persister	41.2	58.8	38.2	61.8
W_a	35.0	65.0	29.9	70.1
W_s	58.3	41.7	37.5	62.5
	N=488	X^2=4.39	N=489	X^2=2.45

FEMALE
df=2

Persister	59.9	40.1	57.0	43.0
W_a	50.9	49.1	48.1	51.9
W_s	57.7	42.3	48.1	51.9
	N=552	X^2=2.76	N=551	X^2=3.31

TABLE 23

QUESTION: Now we would like you to think about yourself and describe yourself as a person.

SCALE: Rating Myself As A Person

(All Figures In Percentages)

MALE
df=2

	Social	Solitary	Free	Constrained	Closed	Open	Happy	Unhappy	Active	Quiet	Warm	Cold
Persister	73.2	26.8	85.7	14.3	32.5	67.5	92.1	7.9	83.7	16.3	90.3	9.7
W_a	74.8	25.2	88.4	11.6	30.8	69.2	93.6	6.4	89.3	10.7	89.7	10.3
W_s	68.2	31.8	77.3	22.7	18.2	81.8	81.8	18.2	85.0	15.0	95.5	4.5
	N=465	X^2=.47	N=469	X^2=1.88	N=455	X^2=2.28	N=459	X^2=3.67	N=463	X^2=1.85	N=449	X^2=.45

TABLE 24

QUESTION: Now we would like you to think about yourself and describe yourself as a person

SCALE: Rating Myself As A Person

(All Figures In Percentages)

FEMALE
df=2

	Social	Solitary	Free	Constrained	Closed	Open	Happy	Unhappy	Active	Quiet	Warm	Cold
Persister	74.5	25.5	74.5	25.5	31.0	69.0	91.4	8.6	79.2	20.8	89.4	10.6
W_a	76.2	23.8	82.4	17.6	29.3	70.7	96.9	3.1	82.0	18.0	96.0	4.0
W_s	64.6	35.4	65.3	34.7	38.8	61.2	92.0	8.0	76.5	23.5	84.0	16.0
	N=514	X^2=2.57	N=523	X^2=5.23	N=512	X^2=1.54	N=518	X^2=3.63	N=512	X^2=.51	N=517	X^2=6.20

unhappy, quiet, and cold. The males tend to be like the females on these dimensions, but the relationships are not as striking nor as consistent.

Identity-seeking Orientations

In line with the earlier theorizing by Erikson (1959) and more recently by Chickering (1968), it seemed important to examine identity-seeking orientations. Two items from a larger question on the purposes or goals of a college education were rated by the students (Question 4): "Finding myself; discovering what kind of person I really want to be," and "Opportunities to think through what I really believe, what values are important to me."

Since identity development has been viewed as one of the critical tasks during the college years we anticipated that these questions would be closely related to the adjustment made by these students. Table 25 presents data on the relationship between attrition and identity orientation as measured by two questions: "Finding myself; discovering what kind of person I really want to be," and "Opportunities to think through what I really believe, what values are important to me."

Although it was anticipated that strong and consistent differences would materialize, our expectations do not appear to have been warranted. The differences are not consistent or significant.

The lack of any significant relationship in these data may be related to the simplistic measures employed to measure a complex dimension or to the fact that students vary greatly in the extent to which this is a conscious concern on entry to college. Furthermore, the very complexity of a university environment on one hand may be conducive to finding satisfaction for those with an identity-searching orientation, while some students with this orientation may also find it desirable to try several within college settings or even drop out to satisfy the need to find a personal identity. Thus, there is likely to be great ambiguity on the degree to which this is an important need and how the need might be satisfied or frustrated in the heterogeneous environment of a particular institution.

In retrospect, then, it is not surprising that we found so little in this particular set of data.

Vocational Preparation and Intellectual Development

The major reasons for selecting a college or university usually include vocational preparation, intellectual development and the social dimension. We have already examined the social dimension rather thoroughly on pages 127-138; in order to complete this examination it seems important to

TABLE 25

QUESTION: People have different ideas about what they look forward to in college, or what they hope to achieve there. Please indicate how important each of the following ideas is to you.

(All Figures In Percentages)

MALE
df=4

	Finding myself, discovering what kind of person I really want to be.			Opportunities to think through what I really believe, what values are important to me.		
	Importance			Importance		
	Great	Moderate	Little Or No	Great	Moderate	Little Or No
Persister	59.5	31.6	8.9	49.7	41.1	9.2
W_a	57.3	41.0	1.7	56.4	39.3	4.3
W_s	62.5	29.2	8.3	50.0	41.7	8.3
		N=489	X^2=9.29		N=489	X^2=3.42

FEMALE
df=4

Persister	75.5	22.0	2.5	68.1	30.1	1.8
W_a	67.0	29.2	3.8	59.5	37.7	2.8
W_s	76.5	19.6	3.9	63.5	32.7	3.8
		N=553	X^2=3.87		N=550	X^2=3.30

look at the students' choices on the dimension of vocational preparation and intellectual development as well.

Tables 26 and 27 illustrate the responses in a checked or not checked format that asked the student to identify the reasons for selecting what was important in the choice of college to attend. Data in Table 26 indicate that for both men and women selecting Michigan for vocational preparation ("Training in my field") is associated with academic failure (W_a); for women a choice based upon vocational preparation also seems associated with withdrawal for social reasons (W_s).

The male that withdrew for social reasons, however, was one who placed little emphasis on vocational preparation; nor did he (W_s) place much emphasis on this being a good institution for intellectual development. It would seem that the W_s, and this is consistent with our findings earlier, had placed much of their expectation on the social-friendship dimensions of the campus experience.

These questions do not help distinguish between the dropout types among women. It is interesting to note, however, that both the W_a and W_s are, among women, more likely to select the institution for training in their chosen field. At least the successful female student is more easily identified if she did not come for vocational preparation.

A relationship between a firm vocational choice and withdrawal is again illustrated in Table 27 where the students were asked to indicate how certain was their choice of a major field of interest. Certainty about the field of preparation is clearly associated with dropping out, especially for academic reasons.

The fact that the student who is less certain about his choice of major or area of vocational preparation tends to remain in the liberal arts college or a heterogeneous-cosmopolitan university may not be true in other college settings. This is a relationship that we would expect to vary substantially in different college settings. In a setting where the total curriculum is more prescribed (engineering, business, nursing, etc.) than in a liberal arts college, the relationship between attrition and certainty about major is likely to be just the opposite of that depicted in Tables 26 and 27.

Omnibus Personality Inventory Scales

The Omnibus Personality Inventory (OPI) was developed to assess personality characteristics among normal and intellectually superior college

TABLE 26

QUESTION: Below are some reasons which may be important in deciding which college or university to go to. Check each one that was important to you in selecting Michigan.

(All Figures In Percentages)

MALE
df=2

	Very good college for my intellectual development.		Very good college for training in my field.	
	Checked	Not Checked	Checked	Not Checked
Persister	73.9	26.1	78.4	21.6
W_a	71.0	29.0	88.0	12.0
W_s	50.0	50.0	66.7	33.3
	N=489	X^2=6.43	N=489	X^2=7.97

FEMALE
df=2

Persister	75.1	24.9	63.0	37.0
W_a	67.0	33.0	72.6	27.4
W_s	69.3	30.7	71.1	28.9
	N=551	X^2=3.17	N=552	X^2=5.13

TABLE 27

QUESTION: How certain are you that you will major in this field of interest?

(All Figures In Percentages)

	MALE df=4			FEMALE df=4		
	Certain			Certain		
	Very	Fairly	Not Too	Very	Fairly	Not Too
Persister	44.1	43.2	12.7	33.6	51.3	15.1
W_a	54.4	41.3	4.3	47.7	46.6	5.7
W_s	42.8	42.8	14.4	42.8	42.8	14.4
	N=351		X^2=6.23	N=409		X^2=9.57

students by the Center for Research and Development in Higher Education (Berkeley). Not all the scales available in the OPI were used in this study; of the thirteen scales described in the 1962 manual the seven scales that seemed to be most relevant to a liberal arts curriculum were used; and in order to shorten the testing time the number of items in the scales was reduced by random selection.[1]

Tables 29 and 30 present percentage distributions for each scale by sex and type of dropout. The "low" range corresponds to approximately the lowest 1/3 of the items of the scale, the "medium" the middle third, and the "high" the top 1/3 of the scale.

Aside from seeing confirmation for some of our earlier findings the OPI scales seem not to provide new insights that would help distinguish among types of dropouts.

The scale on Religious Liberalism (RL) indicates that the more religious male was clearly over-represented among both the W_s and W_a dropouts (see Table 28). This scale also includes the scores from that group of students who withdrew and reported that their religious beliefs were being questioned (Religious Dropouts). Clearly these students (W_r) were the least "liberal" in their views.[2]

The difference between men and women on the RL scale again emphasize the importance of looking for type and sex differences in research. Note for example, that among women the W_s is substantially more liberal than the persister and the W_a less liberal, and at least the female W_s is more liberal than the male W_s.

The Estheticism (ES) scale again illustrates the less aesthetic-cultural orientation among female dropouts, especially when the differences are substantial at the low end of the spectrum. The male W_a is also seen to have a lower esthetic orientation.

Among the other scales a few directions tend to stand out, but there seems to be little that is striking or consistent. For example the male W_s may be characterized as having a greater orientation toward Impulse Expression.

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[1]The scale definitions and representative items are illustrated in Appendix C.

[2]It should be mentioned again, that since no student left solely for "religious reasons," these same students are included among the W_a, W_s and other minor groups not analyzed for this report.

TABLE 28

QUESTION: Omnibus Personality Inventory

SCALE: Religious Liberalism

(All Figures In Percentages)

	MALE df=6			FEMALE df=6		
	Low	Medium	High	Low	Medium	High
Persister	15.4	58.0	26.8	29.8	54.6	15.6
W_a	22.0	61.0	15.6	30.6	60.7	8.8
W_s	29.2	45.8	25.0	23.5	45.0	31.4
W_r	48.0	48.0	4.0	35.5	48.6	16.2
	N=513		X^2=30.78	N=574		X^2=13.78

The Social Maturity (SM) scale suggests high scores are associated with persistence. The term "social maturity" may, however, be misleading; an examination of the items would suggest that high scores would also characterize the non-authoritarian-liberal personality.

In addition, the Theoretical Orientation (TO) scale suggests that the W_s tend to be less theoretically oriented; and among W_s women there seems to be a tendency to be neither highly nor minimally theoretically oriented, i.e., there may be a curvilinear relationship here.

And finally, there is a suggestion among female W_s (see Table 30) that they had a higher orientation toward reflective thought (serious thinking on abstract matters) as measured by the scale on Thinking Introversion (TI). This finding is at least consistent with the word picture of the W_s illustrated on page 136, where from self-descriptive adjectives she was pictured as: solitary, constrained, closed, unhappy, quiet, and cold. It would appear that she tends to be from external appearances as well as internal mental processes "withdrawn" socially and intellectually at the time of entering the University and later withdraws not having found gratification in the social environment.

Environmental Presses

The analysis of the students' personality orientations at entrance and the relationship (if any) of these orientations to the reasons for withdrawal have been grouped in accordance with the concepts and assumptions discussed in the preceding chapters. One of the major concepts has been that of person-environmental fit, thus, the following data are discussed in light of some of these presses.

The aesthetic-cultural orientation of the University appears to be one of the salient environmental presses (see pages 71 - 75). When data from the persisters were compared with data from dropouts in Chapter 4 no relationship was found between the males' aesthetic-cultural orientation and withdrawal; women, however, seemed to be particularly disadvantaged if they came to the University with little interest in the aesthetic-cultural dimensions of life.

When looking at the academic dropouts (W_a) and the social dropouts (W_s) in comparison to the persisters a slightly different picture is suggested. Tables 31 and 32 illustrate the students' answers to several questions bearing upon aesthetic-cultural dimensions. The responses to both questions again indicate that the less cultured female was over-

TABLE 29

QUESTION: Omnibus Personality Inventory

(All Figures In Percentages)

MALE
df=4

	Theoretical Orientation			Thinking Introversion			Estheticism		
	Low	Medium	High	Low	Medium	High	Low	Medium	High
Persister	8.3	53.8	38.1	5.1	67.5	27.4	30.0	54.5	15.6
W_a	8.2	55.3	36.8	8.2	66.4	25.6	40.3	47.0	12.8
W_s	20.8	62.6	16.7	8.3	79.2	12.6	29.1	58.3	12.6
	N=472		X^2=6.61	N=472		X^2=4.25	N=472		X^2=4.72

	Complexity			Impulse Expression			Social Maturity		
	Low	Medium	High	Low	Medium	High	Low	Medium	High
Persister	13.6	66.1	20.3	28.0	53.7	18.5	3.0	55.6	41.6
W_a	17.4	64.3	18.4	26.8	57.8	16.8	7.2	63.2	29.4
W_s	33.4	45.9	20.9	16.7	66.7	32.4	4.2	62.8	33.4
	N=472		X^2=7.08	N=472		X^2=2.46	N=472		X^2=8.02

TABLE 30

QUESTION: Omnibus Personality Inventory

(All Figures In Percentages)

FEMALE
df=4

	Theoretical Orientation			Thinking Introversion			Estheticism		
	Low	Medium	High	Low	Medium	High	Low	Medium	High
Persister	14.6	64.5	23.8	2.7	60.5	37.0	9.8	57.0	33.5
W_a	20.7	59.8	19.7	5.0	69.5	25.4	16.6	62.7	20.7
W_s	9.9	78.4	11.9	5.9	47.1	47.0	17.6	46.9	35.2
	N=543		X^2=8.15	N=543		X^2=10.86	N=543		X^2=11.40

	Complexity			Impulse Expression			Social Maturity		
	Low	Medium	High	Low	Medium	High	Low	Medium	High
Persister	20.2	62.3	17.8	52.1	44.7	3.3	5.3	60.3	34.5
W_a	24.5	59.9	15.7	48.0	44.1	7.9	12.9	64.5	22.6
W_s	17.7	64.7	17.8	45.2	45.2	9.9	9.9	60.8	29.4
	N=543		X^2=1.63	N=543		X^2=7.60	N=543		X^2=11.95

represented among both the W_a and the W_s. These data do not, however, allow us to suggest with much confidence that the W_a or the W_s differ from each other. There is a slight suggestion that the W_s came to the University with less of an aesthetic-cultural orientation than the persister and the W_a, and this would be consistent with our earlier speculation that at least among females the social environment is one that placed greater demands for interest and competence on women.[1]

Among men we find these data to be inconsistent across the three tables. For example the Omnibus Personality Inventory (OPI) scale Estheticism (see Tables 29 and 30) suggests that the W_s and the P are about comparable on their orientations to the aesthetic dimensions of life; however, the W_a is seen to have the lowest score (Low 0-7 column). In contrast, the data in Tables 31 and 32 suggest that it is the W_s who have the least interest in the aesthetic-cultural life; in both of these tables the W_s were over-represented among those placing "little or no importance" on "The world of art and music, the aesthetic life" and on the bi-polar dimension of Artistic-Inartistic.

The size of the University as a press is seen within a concept of the continuity-discontinuity of the students' backgrounds. It was illustrated earlier that the students coming from rural, small-town backgrounds (Table 33) and the smaller schools (Table 34) were disproportionately represented among the dropouts. Since large size would seem to represent a substantial barrier to interpersonal relationships and contribute to one's sense of being lost, it was anticipated that the effect would be greatest on the social dropout.

Data from Tables 33 and 34 again illustrate these relationships with size. While these data indicate that the smaller schools and communities are over-represented among the dropouts, there is no indication that the person having left for social reasons was more likely to come from a smaller community than his or her counterpart among the academic dropouts.

Political attitudes and interests were found to be potentially discordant with the University environment among males as illustrated in Chapter 4; specifically, our data suggested that the beliefs of the politically

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[1]As McMeachie and Lin (1971) have suggested, "This is not an unreasonable assumption since both anthropologists and psychologists have long reported that females in our culture are more people-oriented than are males."

TABLE 31

QUESTION: Different people's evaluations of themselves hinge on different things.... Now we would like you to consider how <u>important</u> each of these characteristics is for your evaluation of yourself.

ITEM: Artistic - Inartistic

(All Figures In Percentages)

MALE
df=6

	Extremely Important	Very Important	Important	Little Or No Importance
Persisters	6.7	14.2	32.4	46.7
W_a	4.3	12.8	35.0	47.9
W_s	4.2	4.2	37.5	54.1
		N=486	X^2=3.40	

FEMALE
df=6

Persister	10.6	18.1	32.5	38.8
W_a	6.7	18.1	37.1	38.1
W_s	8.0	12.0	38.0	42.0
		N=542	X^2=3.25	

TABLE 32

QUESTION: People differ in the importance they attach to different areas of life.... When you think of your life after college, how important do you expect each of the following areas will be for you?

ITEM: The World of Art and Music, the Aesthetic Life

(All Figures In Percentages)

MALE
df=6

	Little Or No Importance	Important	Very Important	Crucially Important
Persister	25.2	46.7	24.6	3.5
W_a	23.9	52.1	19.7	4.3
W_s	54.2	25.0	16.7	4.1
		N=486	X^2=12.15	

FEMALE
df=6

Persister	9.7	53.2	28.9	8.2
W_a	13.2	54.7	25.5	6.6
W_s	15.4	50.0	26.9	7.7
		N=549	X^2=1.65	

TABLE 33

QUESTION: Check one of the following places which best describes the place where you lived most of your life.

ITEM: Population

(All Figures In Percentages)

MALE
df=10

	Less Than 2,500	2,500 to 9,999	10,000 to 49,999	50,000 to 200,000	More Than 200,000	Suburb of a Metropolitan City, Close to and Almost A Part of That City
Persister	7.2	5.8	15.1	17.7	28.4	25.8
W_a	15.0	14.2	17.7	21.2	11.5	20.4
W_s	8.7	8.7	21.7	8.7	39.1	13.1
		N=481			X^2=29.82	

FEMALE
df=10

Persister	4.9	7.9	15.6	20.5	25.3	25.8
W_a	11.8	12.7	17.6	24.5	15.7	17.7
W_s	9.6	13.5	19.2	9.6	25.0	23.1
		N=545			X^2=19.62	

TABLE 34

QUESTION: About how many students were there in your high school graduating class?

(All Figures In Percentages)

MALE
df=8

	Less Than 100	100 to 199	200 to 399	400 to 599	600 or More
Persister	15.0	12.7	27.5	23.4	21.4
W_a	26.3	19.3	25.5	14.9	14.0
W_s	13.0	30.4	30.4	4.4	21.8
		N=483		X^2=21.74	

FEMALE
df=8

Persister	12.4	17.5	24.9	20.6	24.6
W_a	20.2	20.2	30.8	20.2	8.6
W_s	28.8	13.5	28.8	15.4	13.5
		N=550		X^2=24.20	

TABLE 35

QUESTION: Regardless of the immediate issues, how do you usually think of yourself--as a Republican or Democrat, or what?

(All Figures In Percentages)

	MALE df=4			FEMALE df=4		
	Republican	Democrat	Other	Republican	Democrat	Other
Persister	38.4	31.0	30.6	37.4	33.5	29.1
W_a	44.2	22.2	33.6	40.8	30.1	29.1
W_e	40.9	36.4	22.7	31.4	35.3	33.3
	N=468		X^2=4.15	N=525		X^2=1.74

TABLE 36

QUESTION: If a Negro with the same income and education as you have moved into your block, would it make any difference to you?

(All Figures In Percentages)

	MALE df=4			FEMALE df=4		
	Yes	No	Don't Know	Yes	No	Don't Know
Persister	20.1	29.0	50.9	13.2	29.3	57.5
W_a	23.8	33.0	43.2	19.2	36.5	44.3
W_s	18.1	36.3	45.6	21.1	26.9	52.0
	N=468		X^2=2.35	N=527		X^2=7.57

TABLE 37

QUESTION: Do you think most Negroes in the U.S. are being treated fairly or unfairly?

(All Figures In Percentages)

	MALE df=4			FEMALE df=4		
	Fairly	Unfairly	Don't Know	Fairly	Unfairly	Don't Know
Persister	8.2	10.4	81.4	8.5	7.0	84.5
W_a	17.5	8.7	73.8	14.3	10.5	75.2
W_s	0	20.8	79.2	5.8	7.7	86.6
	N=464		X^2=45.97	N=525		X^2=6.64

TABLE 38

QUESTION: Please indicate how you feel about each of the following important public issues.

ITEM: Congressional Investigation of "Un-American" Activities

(All Figures In Percentages)

	MALE df=4			FEMALE df=4		
	Approve	Indifferent	Disapprove	Approve	Indifferent	Disapprove
Persister	61.5	13.1	25.4	61.0	16.3	22.7
W_a	67.0	17.9	15.1	81.0	12.4	6.6
W_s	50.0	12.5	37.5	71.2	15.4	13.6
	N=463		X^2=31.68	N=526		X^2=14.41

TABLE 39

QUESTION: Please indicate how you feel about each of the following important public issues.

ITEM: Negro Sit-ins

(All Figures In Percentages)

MALE
df=8

	Strongly Approve	Approve	Indifferent	Oppose	Strongly Oppose
Persister	19.1	35.9	16.8	18.3	9.9
W_a	10.5	30.7	26.3	23.6	8.0
W_s	37.5	25.0	16.6	16.6	4.3

N=477 X^2=15.30

FEMALE
df=8

Persister	18.3	39.8	16.9	20.4	4.6
W_a	7.7	39.4	27.8	19.2	5.9
W_s	13.4	34.6	30.7	15.3	6.0

N=522 X^2=15.09

conservative male were discongruent with some of the dominant values and presses of the University's environment. Tables 35 through 39 present the relationship between attrition and a number of measures of political attitudes that can be ordered roughly along a conservative-liberal dimension.

The answers to the question "Regardless of the immediate issues, how do you usually think of yourself--as a Republican or Democrat, or what?" are illustrative of the trend found among these tables. It was consistently true that the male W_a took what would generally be regarded as a more conservative position. For example, he was most likely to think of himself as a Republican or to approve of the "Congressional investigation of 'un-American' activities;" likewise on the issues dealing with Negro civil rights, he consistently took a less liberal view.

The responses from females were generally along the same lines, i.e., the more conservative respondent tended to be over-represented among the W_a; the results, however, are not consistent and by no means striking.

A concluding point seems necessary regarding the interpretation of these data in relation to the notion of a "congruence model." Since this aspect of the study is confined to a single institution, the model cannot be tested in the same systematic way that would be possible if institutions with different presses but similar student bodies were involved. Instead the conceptual model merely serves as an underlying orientation for the interpretation of findings and the formulation of hypotheses.

Religion and Withdrawal

The relationship between strength of religious orientation and tendency to withdraw is summarized in the four tables which follow. The most general observation that must be made from the data shown is that on none of the scales (frequency of attendance, religious self-perception, importance after college, or religious preference) do the female withdrawals differ from the female persister. Strength or type of religious commitment seems to be unrelated to withdrawal for women.

Male withdrawals differ from male persisters on two of the four scales. They are more regular in church attendance, and they are more likely to be Catholic and less likely to be Jewish than their counterparts among the persisters. The observation on attendance collapses into and confirms the second observation when one considers that regular attendance is a condition of the Catholic faith whereas Jews might tend to participate only in the

TABLE 40

QUESTION: How often do you attend religious services?

(All Figures In Percentages)

	MALE df=5		FEMALE df=5	
Alternative Responses	Dropout	Persister	Dropout	Persister
Once a week or more	40.6	26.9	40.6	41.2
Two or three times a month	21.8	19.2	14.6	17.4
Once a month	8.9	10.3	8.6	7.3
A few times a year	12.5	30.9	24.1	24.0
Rarely over the years	7.7	8.0	5.7	6.6
Never	5.2	3.4	4.8	3.0
Not ascertained	3.3	1.1	1.6	.5
	N=271	N=349	N=315	N=396
	X^2=33.151		X^2=2.797	

TABLE 41

QUESTION: Now we would like you to think about yourself and how you would describe yourself as a person.... Please indicate the location on each scale where you presently picture yourself by an X.

SCALE: Religious - Agnostic

(All Figures In Percentages)

	MALE df=6		FEMALE df=6	
Religious	Dropout	Persister	Dropout	Persister
Extremely	14.0	9.7	18.1	21.0
Quite closely	25.5	24.9	36.2	31.1
Slightly	21.0	23.2	17.8	20.7
Equally relevant	11.4	10.0	6.0	5.1
Slightly	7.4	10.0	6.3	4.8
Quite closely	10.0	8.9	6.0	6.1
Extremely	9.6	11.7	8.9	9.3
Agnostic				
Not ascertained	1.1	1.2	.6	2.1
	$X^2=5.333$		$X^2=3.969$	

TABLE 42

QUESTION: "People differ in the importance they attach to different areas of life.... When you think of your life after college, how important do you expect each of the following areas will be to you?"

SCALE: Religious Beliefs Or Activities

(All Figures In Percentages)

	MALE df=3		FEMALE df=3	
	Dropout	Persister	Dropout	Persister
Little or no importance	17.7	20.9	16.2	13.1
Important	37.6	42.4	36.2	39.6
Very important	30.3	24.9	33.7	30.8
Crucially important	14.0	11.5	13.3	15.2
Not ascertained	.4	.3	.6	1.3
	N=271	N=349	N=315	N=396
	X^2=4.048		X^2=2.521	

TABLE 43

SCALE: Religious Preferences of the Dropouts and Persisters

(All Figures In Percentages)

	MALE df=2*		FEMALE df=2*	
	Dropout	Persister	Dropout	Persister
Protestant	43.6	37.8	48.0	47.7
Catholic	21.8	14.6	17.5	15.9
Jewish	8.9	26.9	20.0	24.7
Orthodox	.4	.3	1.6	--
Other and no preference	25.5	20.4	12.9	11.6
	N=271	N=349	N=315	N=396
	X^2=20.861		X^2=1.980	

* Protestant, Catholic, and Jewish preferences only

major religious holidays of that faith. Earlier research (McClelland, 1958) summarizing six studies of occupational achievement found that Jews tend to be high achievers, whereas Catholics tend to be low achievers as compared to Jews as well as to other groups. Students professing a preference for the Catholic church may have attitudes, motivations and values less focused on success as determined by college achievement than those of other faiths. Therefore, the fact that the percentage of withdrawals was high for male Catholics may not result so much from a lack of fit between the person and the environment as from systematic differences in attitudes.

Intellective-Cosmopolitan Withdrawals

This small sample (N=25) is comprised of people who gave as their reason for leaving a disappointment with the intellectual stimulation or the social sophistication of the institution and/or their peers. The sample was too small to analyze according to sex. Selected items from the entrance questionnaire were studied for attitudes which might distinguish these individuals either from persisters or from other withdrawals.

At entrance the IC group had a higher mean score than the persisters on the SAT verbal test ($\overline{X}_{IC}$=640, $\overline{X}_{p}$=571) but about the same mean score as the persisters on the mathematical part of that test ($\overline{X}_{IC}$=604, $\overline{X}_{p}$=595). They were less likely to have fathers with some college education than were the persisters. They were less likely to come from large graduating classes than were persisters.

Their responses to entrance questionnaires indicated that they attached more importance to the world of ideas (the intellectual life) than did either persisters or other withdrawals. They avowed less concern with careers or occupations than did either of the other two groups. They displayed a stronger tendency to perceive themselves as politically liberal than either group of their contemporaries. They saw themselves on a conventional-unconventional scale more nearly unconventional than did the other two groups (see Tables 44 and 45).

The IC group could be distinguished from their contemporaries on the small importance they attached to the conservative-liberal scale, but they joined the persisters in their lack of zeal for the intelligent-not intelligent scale of self-perception with the other withdrawals dissenting from the majority opinion. When asked to rank six important areas or interests in life (theoretical, economic, aesthetic, social, political, and religious) in order of importance to them, the IC group proved to be more

TABLE 44

QUESTION: People differ in the importance they attach to different areas of life.... When you think of your life after college, how important do you expect each of the following areas will be to you?

(All Figures In Percentages)

	The World of Ideas, the Intellectual Life		Career or Occupation	
	Unimportant	Important	Unimportant	Important
Persister	30	70	75	25
W_{IC}	18	82	86	14
W_{Other}	37	63	70	30
	N=1344	X^2=6.72	N=1336	X^2=4.01
	df=2		df=2	

TABLE 45

QUESTION: Now we would like you to think about yourself and describe yourself as a person

(All Figures In Percentages)

	Politically Conservative	Politically Liberal	Conventional	Unconventional
Persister	38	62	57	43
W_{IC}	23	77	35	65
W_{Other}	36	64	59	41
	N=1058	X^2=3.17	N=1194	X^2=4.78
		df=2		df=2

TABLE 46

QUESTION: Now we would like you to consider how important each of these characteristics is for your evaluation of yourself.

(All Figures In Percentages)

	Conservative - Liberal		Not Intelligent - Intelligent	
	Unimportant	Important	Unimportant	Important
Persister	16	84	72	28
W_{IC}	38	62	71	29
W_{Other}	18	82	65	35
	N=1329	X^2=6.65	N=1330	X^2=8.25
		df=2		df=2

TABLE 47

QUESTION: Below are listed six important areas or interests in life. People differ in the emphasis or degree of importance that they attribute to each of these interests. Please rank the six interests in terms of their importance to you.

1. Theoretical
2. Economic
3. Aesthetic
4. Social
5. Political
6. Religious

(All Figures In Percentages)

	Social 1st	Other 1st	Political Important (1st-3rd)	Political Unimportant (4th-6th)
Persister	48	52	23	77
W_{IC}	73	27	10	90
W_{Other}	45	55	17	83
	N=1310	X^2=5.37	N=1402	X^2=8.69
		df=2		df=2

concerned with the social realm than either of the other groups and more disdainful of the political aspects of life (see Table 47).

The composite profile for this group is that of an individual coming from a not-highly sophisticated environment (e.g., educational level of father and size of graduating class); a person with an iconoclastic self-perception (liberal and unconventional) and manifest reservations with regard to established institutions and systems of rewards; a person who nonetheless harbors expectations for the social mobility a college education can afford (concern with social aspect of life); a person easily disappointed and readily disassociated.

Summary

The findings of this chapter are probably seen most clearly through an illustration that interrelates the two major types of dropouts with sex.[1]

	Withdrawals	
	Academic	Social
Men:	Low Sense of Competence and Self Esteem	Low Sense of Competence and Self Esteem
	Low Social and Friendship Expectations	High Social and Friendship Expectations
	Highly Concerned About Adequacy in School and Work	Concerned About Adequacy in School and Work
	Unconcerned About Adequacy in Social Relationships	Concerned About Adequacy in Social Relationships
	Goal of Vocational Preparation	Low Emphasis on Vocational Preparation
	Low Esthetic Orientation	Low Emphasis on Intellectual Preparation
		High Impulse Expression

---

[1] The religious dropouts and the too intellective-cosmopolitan types have just been discussed on the preceding pages and it serves little purpose to mention them again.

	Withdrawals	
	Academic	Social
Women:	Low Social and Friendship Expectations	High Social and Friendship Expectations
	Somewhat Less Attractive	Much Less Attractive
	Described as: Social, Free, Open, Happy, Active, Warm	Described as: Solitary, Constrained, Closed, Unhappy, Quiet, Cold
	Conservative Religious Views	Goal of Vocational Preparation
	Goal of Vocational Preparation	Prefers Reflective Thought
		Liberal Religious Views

While there is a definite lack of precision as one reduces human responses to numbers, which in turn are manipulated through computation, then labeled in tables summarized in an illustration, and finally expressed in a few phrases, nevertheless we feel the following tends to characterize these types of dropouts:

Male-Academic: A person with low sense of self esteem and competence who is concerned about preparing for a specific vocation and does not care about social relationships.

Female-Academic: We believe there are really two types here; one of them is in part like the male academic dropout in that she is less concerned about social relationships and is interested in a particular career; the other may be the "party girl"--out for a good time; she describes herself as social, free, open, happy, active and warm.

Male-Social: This person is lacking a sense of competence and adequacy; he is not interested in intellectual or vocational development; however, he is hoping to form agreeable friendships.

Female-Social: She is withdrawn intellectually and socially, but has high hopes for forming agreeable friendships.

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CHAPTER SEVEN

THE UNIVERSITY OF WASHINGTON STUDY

Keith Pailthorp

Introduction

A survey instrument similar to the followup questionnaire used for University of Michigan withdrawals was sent to a sample of University of Washington withdrawals and persisters. The purpose was to test the Michigan typology on students at a different (though similar) institution and at a later time (1962 and 1963 vs. 1968 freshmen).

In the absence of information on entrance characteristics we decided to compare responses to a set of questions on problems encountered while at the University. Comparisons were made between types of withdrawals as well as with persisters. Certain items were common to the Michigan questionnaire. In some cases the wording was altered to conform to the current idiom. In the interest of brevity only thirteen items were included and for the sake of comprehensiveness questions intended to measure the intellective-cosmopolitan and liberal-conservative orientations were introduced.

The basic questions we hoped the study would answer were:

1) Does the typology developed at the University of Michigan translate to the University of Washington across a span of five to six years or is it necessary to expand the typology to accommodate new withdrawal phenomena?

2) Are there important differences in perception of problems encountered at the University not only between types of withdrawals but also between persisters and withdrawals?

Procedure

Two lists were developed by random selection from the 1968-69 and 1969-70 student directories. The first list (ostensible withdrawals) consisted of people who were listed as having freshman standing at the University of Washington in the fall of 1968 but who were not listed in the 1969-70 student directory. The second list (ostensible persisters) consisted of people listed as having freshman standing in the fall of 1968 who were subsequently listed in the 1969-70 student directory.

The people on these two lists were sent identical packets containing:

1) a cover letter explaining the purpose and the mechanics of the study

2) the questionnaire (see Appendix B)

3) a return-addressed envelope for the questionnaire

4) a return-addressed postcard for the purpose of notifying us of their response while preserving their anonymity on the questionnaire

A first mailing of 660 packets (349 ostensible withdrawals and 311 ostensible persisters) was made on November 22, 1970 to coincide with the Thanksgiving holiday when students and others would likely be returning home. From this mailing 43 packets were returned undelivered, 173 completed questionnaires were returned, and 162 postcards returned. A second mailing of 455 packets (with a modified cover letter) was made on December 22, 1970 to coincide with the Christmas holidays. From this mailing 12 packets were returned undelivered, 131 completed questionnaires were received, and 110 postcards returned. The overall response for mail that was ostensibly received (605) was 304 completed questionnaires, or 50.3 percent.

A telephone canvass was made of 55 randomly selected individuals from the 301 remaining non-respondents in an attempt to characterize this group. Twenty-seven individuals were contacted. Eight had already returned their questionnaires (but not the postcard). Twelve questionnaires were ultimately returned from the others. The remaining 28 individuals could not be traced because they had moved one or more times. The reasons given for withdrawal by these dropout respondents were similar to those of earlier respondents. The canvass did suggest that the earlier-cited figure of 50.3 percent is an underestimate of the percent of forwarded questionnaires returned.

Assignment to groups within the withdrawal typology had to be made on the basis of the response to an open-ended question: "If you are no longer at the University of Washington please give your reason or reasons for leaving." Responses to this question were often clarified or qualified by the response to the last item on the questionnaire, "The foregoing list is by no means intended to exhaust the set of problems encountered by students. Therefore you are invited and encouraged to elaborate some concerns which stand out as important in your experience at the University." All assignments were subjected to two independent referees and conflicts were later resolved in conference between them.

The responses are tablulated in Table 48. Table 49 shows the responses of the groups divided by sex. The discussion will focus on the figures which graphically depict the data of the tables.

Table 48. Importance of problem dimensions for typed withdrawals and persisters

PROBLEM	persisters (N=202)		W_{AC} (N=28)		W_{SOC} (N=8)		W_{INV} (N=32)		W_{IC} (N=30)		W_{REL} (N=4)		W (N=102)
	MEAN	S.E.	MEAN	S.E.	MEAN	S.E.	MEAN	S.E.	MEAN	S.E.	MEAN	S.E.	MEAN
A difficulty developing proper study habits... utilizing my time	1.967	0.078	3.071	0.170	1.000	0.267	2.062	0.200	2.033	0.217	1.250	0.750	2.216
A fear of academic failure--not able to maintain a 'C' average	1.305	0.081	2.393	0.208	0.875	0.227	1.594	0.215	1.100	0.162	1.000	0.577	1.588
A disappointment in a relationship with the opposite sex-- a hurt, loss, or rejection	1.205	0.082	1.000	0.178	0.875	0.479	0.750	0.201	0.933	0.230	0.500	0.500	0.873
A feeling of being lost at the University because it is so big and impersonal	1.148	0.078	1.500	0.215	2.623	0.324	1.250	0.201	1.867	0.243	2.500	0.866	1.618
A concern that my religious beliefs were being challenged and threatened	0.524	0.067	0.571	0.202	2.625	0.420	0.531	0.206	0.367	0.155	2.000	1.155	0.559
A problem with the police or with the disciplinary agents of the University	0.286	0.047	0.143	0.112	0.500	0.327	0.094	0.069	0.100	0.056	0.000	0.000	0.147
A disappointment in having too little contact with the faculty	1.852	0.079	1.964	0.233	1.750	0.620	2.062	0.210	2.067	0.214	2.750	0.750	2.039
An inability to find individuals or groups with whom I could identify	1.233	0.077	1.286	0.198	2.250	0.491	1.438	0.200	1.467	0.243	2.250	1.031	1.500
Disillusionment with the purpose of a college education	2.105	0.085	2.464	0.202	2.375	0.565	2.125	0.241	2.900	0.205	1.750	0.854	2.450
A disappointment with the "snobbishness" of most social groups on campus	0.829	0.067	1.250	0.168	1.375	0.324	0.875	0.178	1.200	0.206	1.500	0.646	1.137
The failure of the coursework to challenge me intellectually	1.495	0.074	1.250	0.168	1.000	0.378	1.406	0.219	1.733	0.239	0.750	0.479	1.402
Impatience with the superficiality of much that is considered a part of college	2.076	0.082	2.000	0.192	1.750	0.620	1.688	0.239	2.533	0.229	2.750	0.750	2.069
A feeling that the University is not active enough in promoting needed changes in our society	1.895	0.086	1.571	0.181	1.875	0.515	1.156	0.216	1.633	0.189	0.750	0.750	1.451
TOTAL	17.92		20.463		18.875		17.031		19.933		19.75		

Table 49 Comparison of Female and Male for persisters and for withdrawal groups large enough to sustain partition

PROBLEM	persisters MEAN F(94)	M (108)	W_{AC} MEAN F(12)	M(16)	W_{INV} MEAN F(26)	M(6)	W_{IC} MEAN F(16)	M(14)
A difficulty developing proper study habits... utilizing my time	1.787	2.126	2.833	3.250	2.115	1.833	1.938	2.143
A fear of academic failure--not able to maintain a 'C' average	1.277	1.324	2.417	2.375	1.731	1.000	1.063	1.143
A disappointment in a relationship with the opposite sex-- a hurt, loss, or rejection	1.255	1.153	0.833	1.125	0.846	0.333	1.063	0.786
A feeling of being lost at the University because it is so big and impersonal	1.032	1.234	1.417	1.563	1.385	0.667	1.375	2.429
A concern that my religious beliefs were being challenged and threatened	0.691	0.369	0.667	0.500	0.538	0.500	0.375	0.357
A problem with the police or with the disciplinary agents of the University	0.255	0.324	0.250	0.063	0.115	0.000	0.063	0.143
A disappointment in having too little contact with the faculty	1.691	1.973	2.167	1.813	2.192	1.500	2.188	1.929
An inability to find individuals or groups with whom I could identify	1.128	1.306	1.250	1.313	1.423	1.500	1.313	1.643
Disillusionment with the purpose of a college education	2.011	2.189	2.417	2.500	2.192	1.833	2.750	3.071
A disappointment with the "snobbishness" of most social groups on campus	0.851	0.847	1.333	1.188	0.885	0.833	1.125	1.286
The failure of the coursework to challenge me intellectually	1.489	1.505	0.833	1.562	1.308	1.833	1.875	1.571
Impatience with the superficiality of much that is considered a part of college	2.074	2.090	2.167	1.875	1.769	1.333	2.438	2.643
A feeling that the University is not active enough in promoting needed changes in our society	1.936	1.865	1.750	1.438	1.115	1.333	1.625	1.643

FIGURE 9: Comparison of all withdrawals with persister (U of W) on importance of problems encountered at the university.

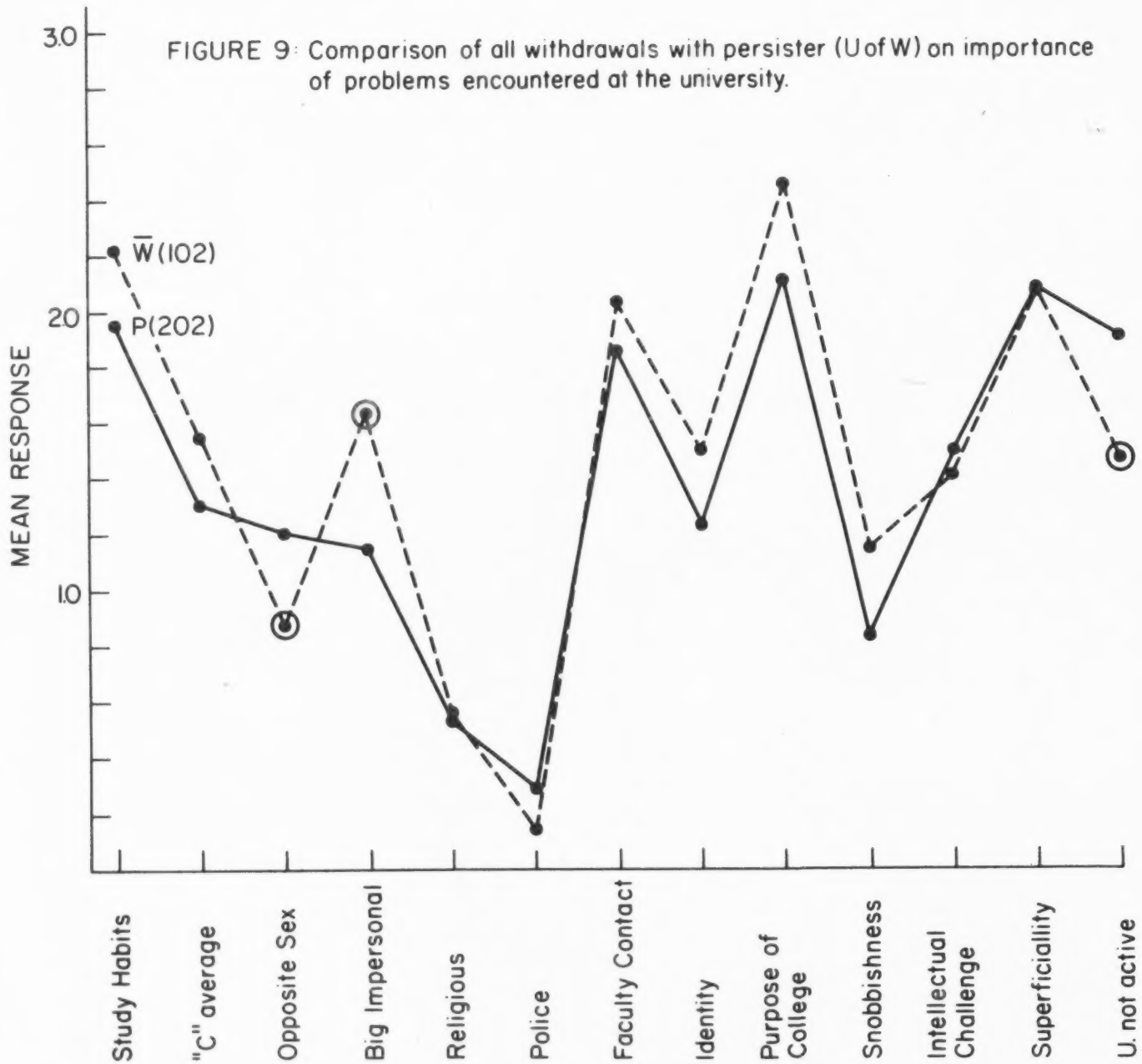


FIGURE 10: Comparison of involuntary withdrawals with persisters (U.of W.) on importance of problems encountered while at the university.

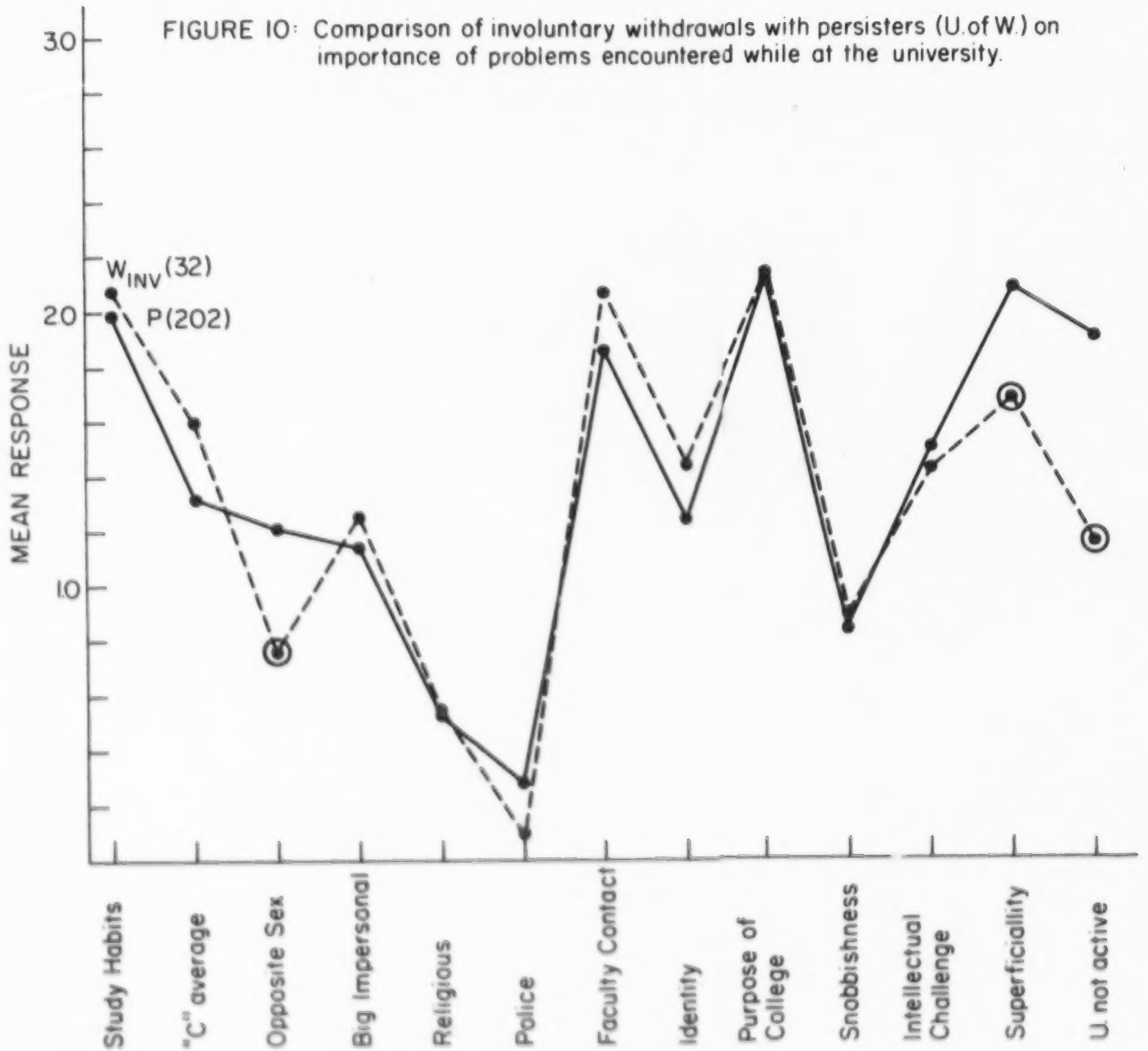


Figure 9 shows a comparison of the responses of persisters with those of withdrawals (untyped) for the thirteen problem dimensions. A group's response to a given problem dimension is considered significant (circled) only when the mean response for that group differs from the mean response for all other respondents being considered by an amount which could be expected to occur by chance alone less than five times in one hundred replications of the study.

Overall, the profiles are similar. Where the persisters evince less concern with the problem (notably the large and impersonal nature of the University and the snobbishness of campus social groups), the difference probably results from acclimatization--the persister having a longer time to familiarize himself with and to form attachments within the institution. The fact that persisters assign more importance to problems with the opposite sex would seem to stem from their longer duration of exposure to the roughly constant probability of "hurts, losses, or rejections" in an area of life where "acclimatization" occurs much later (if indeed ever). The greater importance assigned by persisters to the need for the University to adopt an active role in effecting social change suggests that the University of Washington exerts a general liberalizing influence on its students.

Figure 10 contrasts involuntary withdrawals (those who would have persisted but for some immediate external influence: economic, health, marital, etc.) with persisters. Here the profiles are understandably quite close, with the W_{INV} group expressing less concern with the superficiality of college and showing less eagerness for the University to engage in social reform. Moreover, the similarity in relative importance assigned the problem dimensions is reinforced by a closely similar pattern of correlations between the various problem dimensions (see Figure 16). Overall, the closeness of perception of the problem dimensions speaks for a small influence of perspective. One group consisted of respondents as much as two years removed from the University while the other group was entirely in residence.

Figure 11 shows a comparison of the remaining three major withdrawal groups and the persisters. The profile for the academic withdrawals is remarkable only in a most unremarkable way. As expected they evince far more concern with the development of proper study habits and achievement of a passing average. To find the social withdrawals at the other extreme

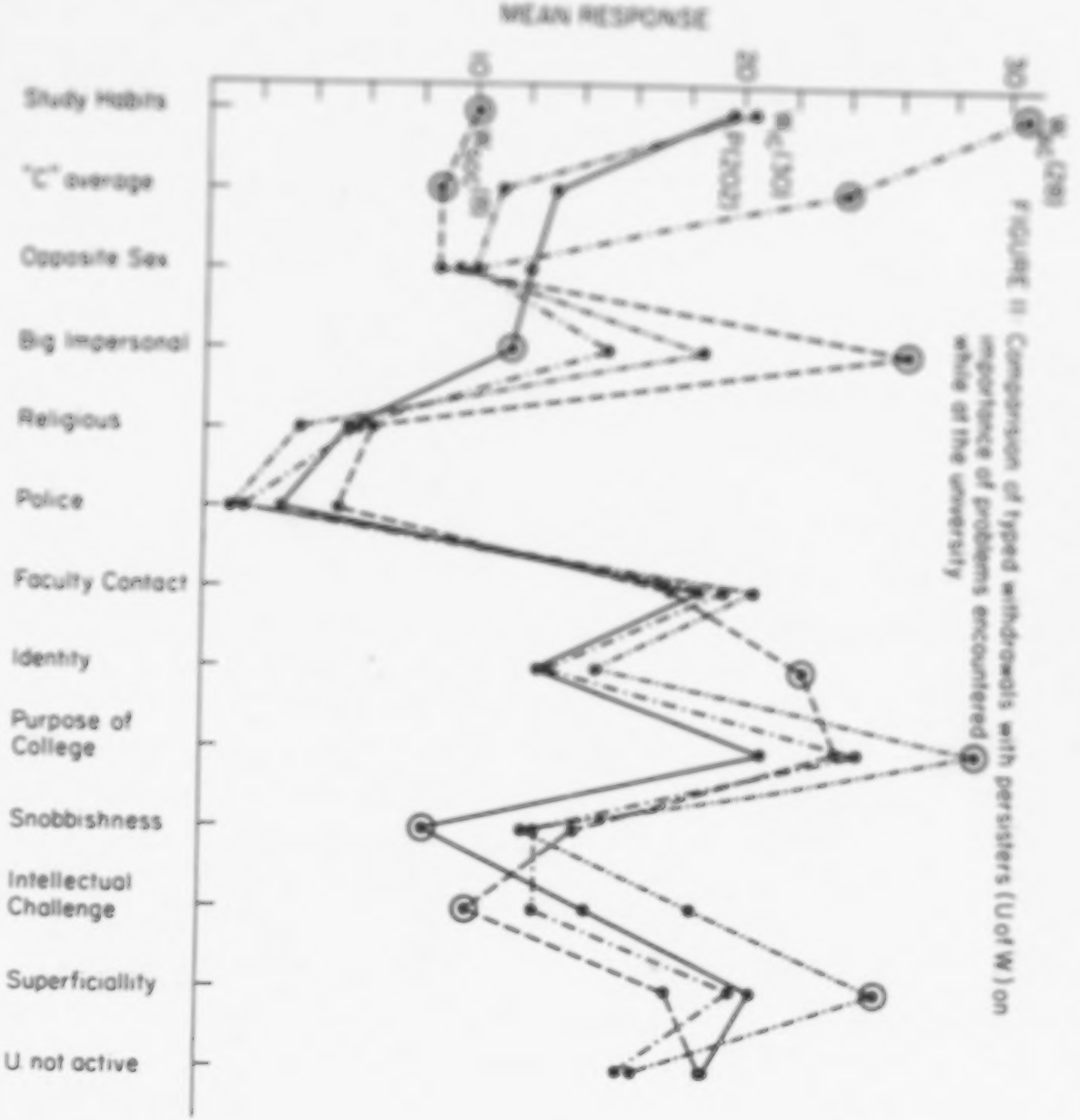


FIGURE II Comparison of typed withdrawals with persisters (U of W) on importance of problems encountered while at the university

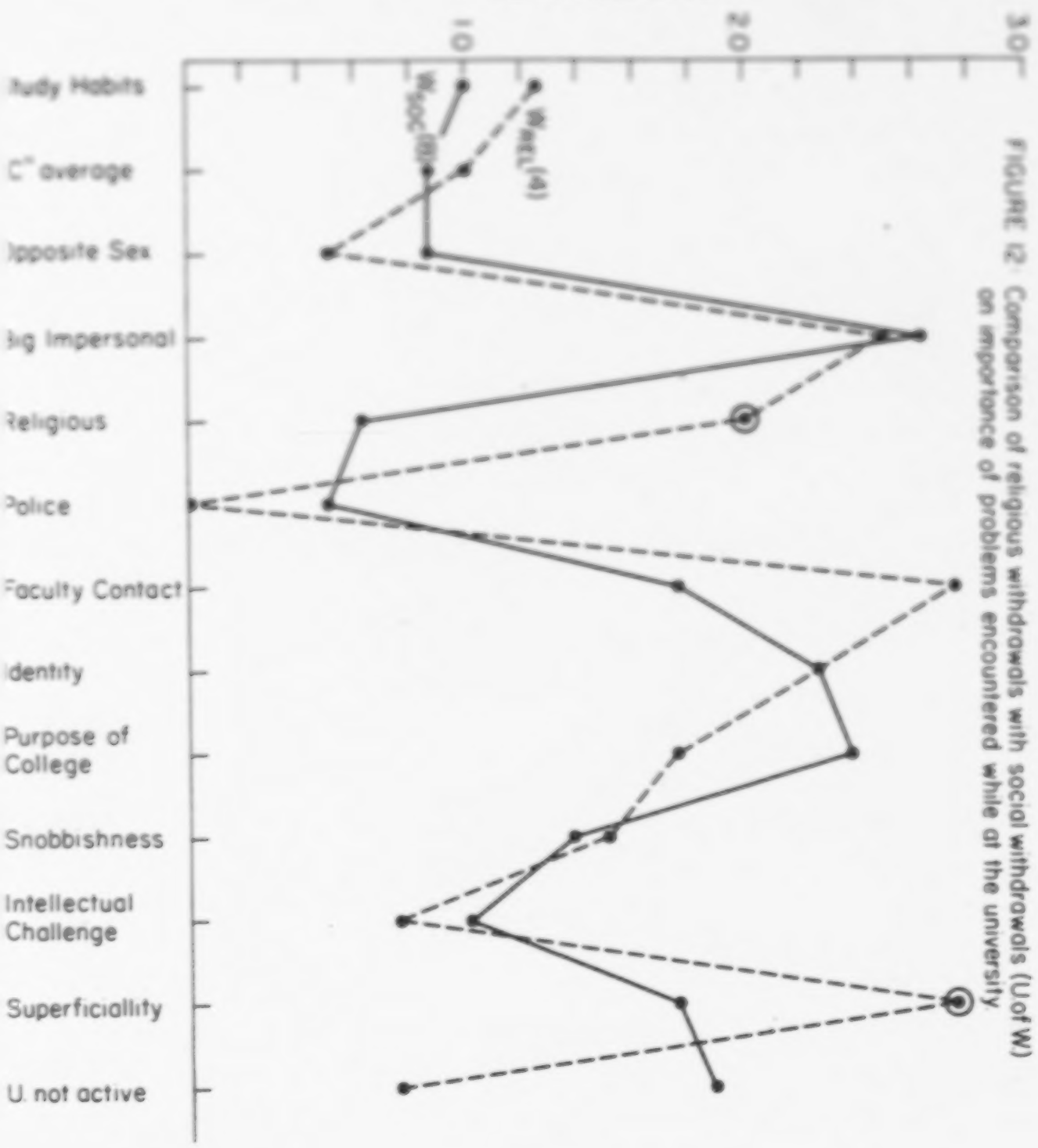


FIGURE 12 Comparison of religious withdrawals with social withdrawals (U of W) on importance of problems encountered while at the university

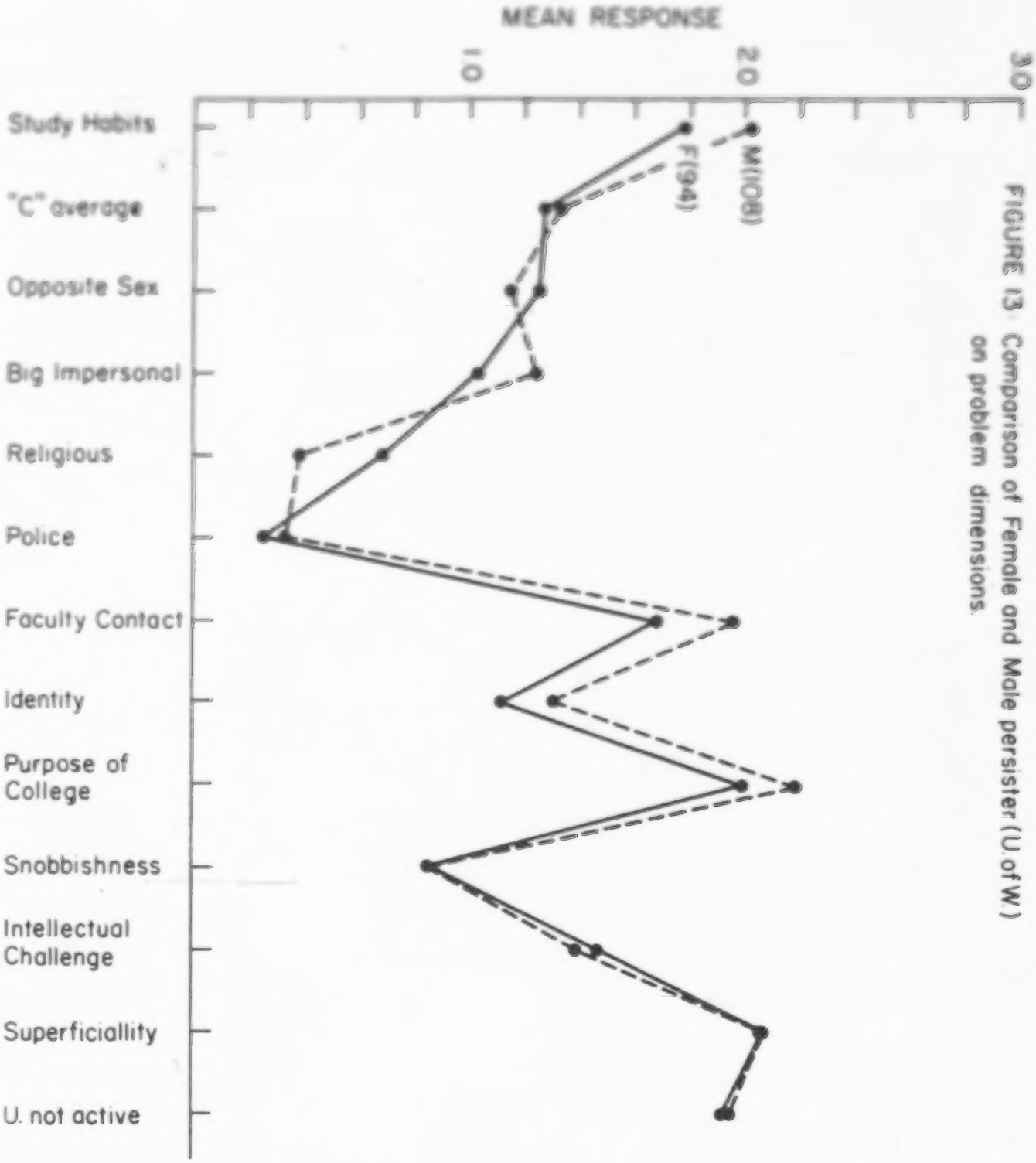


FIGURE 13 Comparison of Female and Male persister (U. of W.) on problem dimensions.

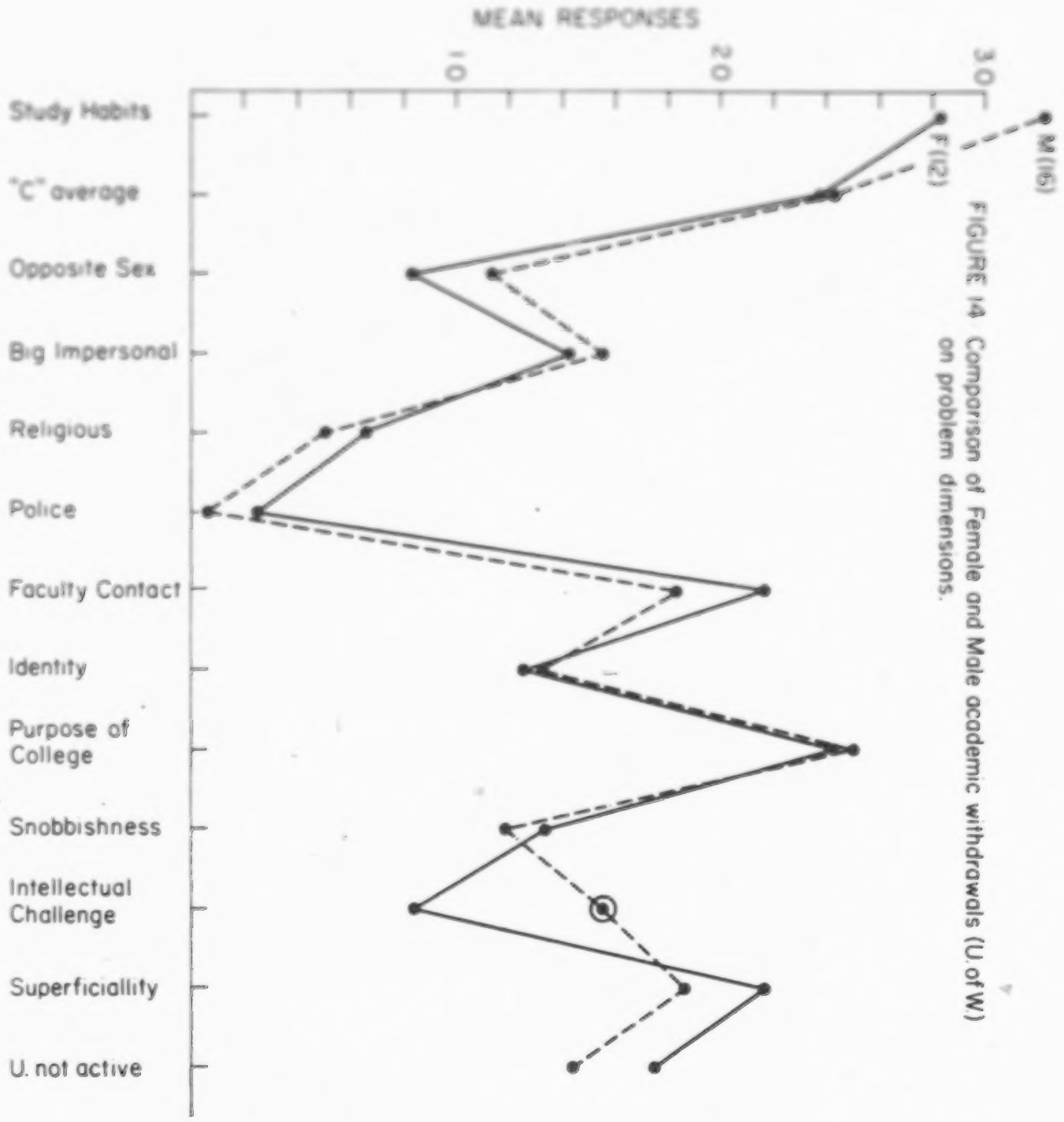


FIGURE 14 Comparison of Female and Male academic withdrawals (U. of W.) on problem dimensions.

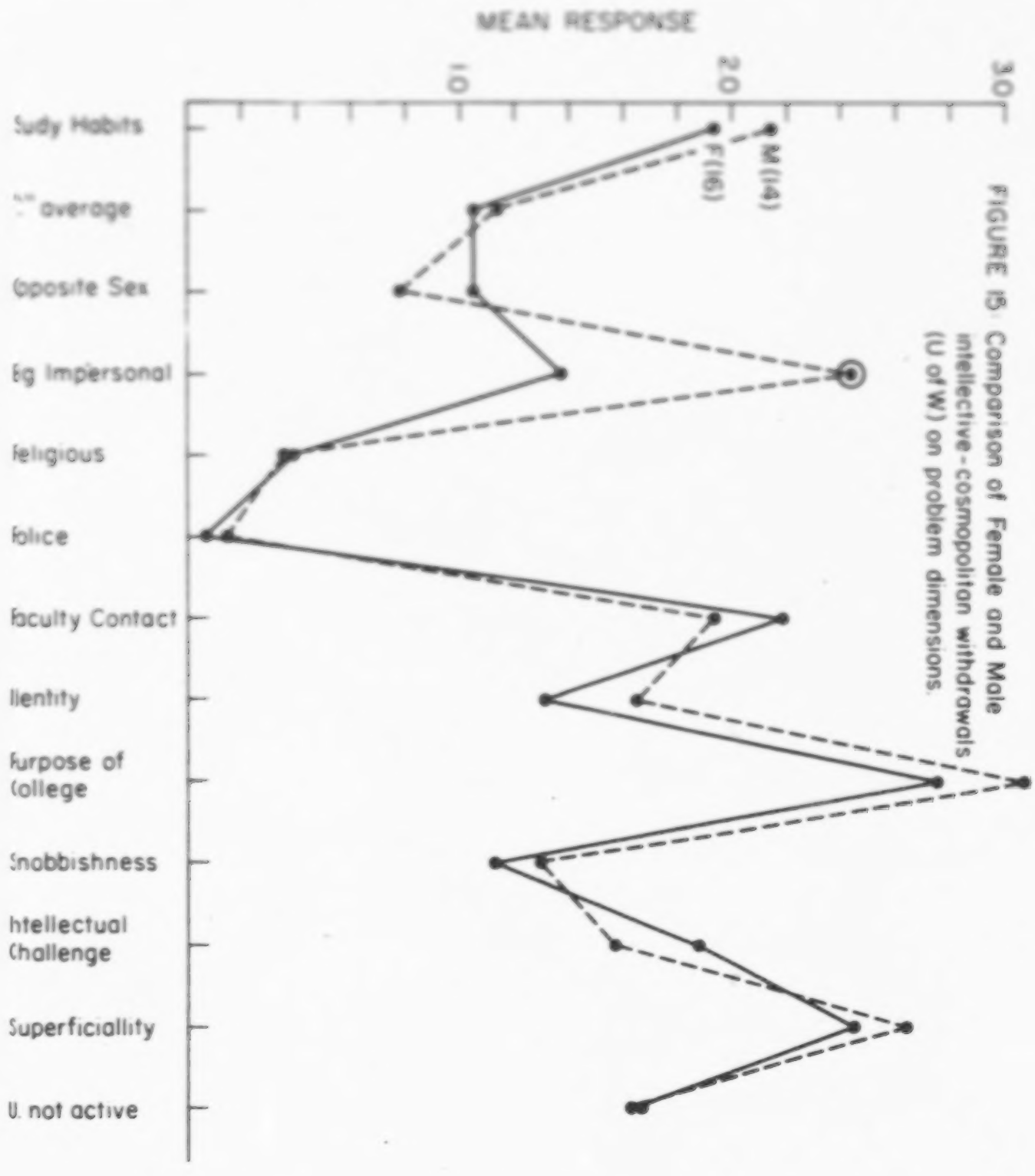
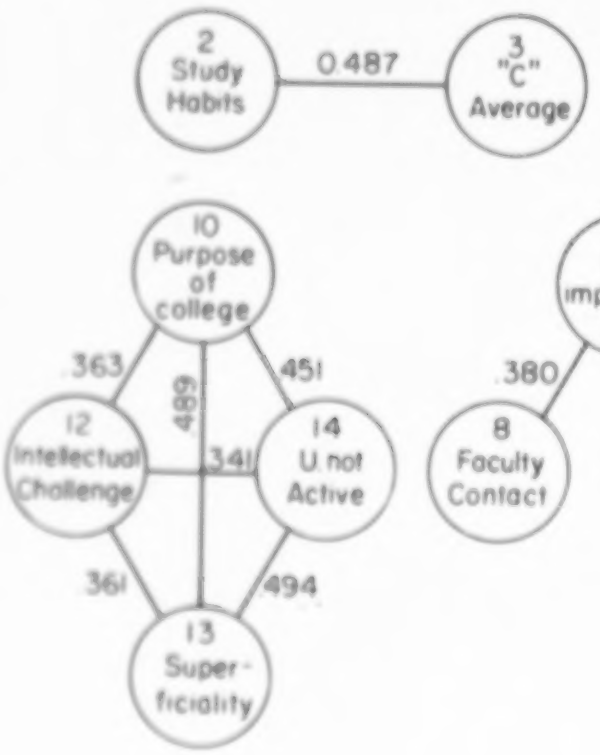


FIGURE 15. Comparison of Female and Male intellective-cosmopolitan withdrawals (U of W) on problem dimensions.

FIGURE 16 Correlations of problem dimensions

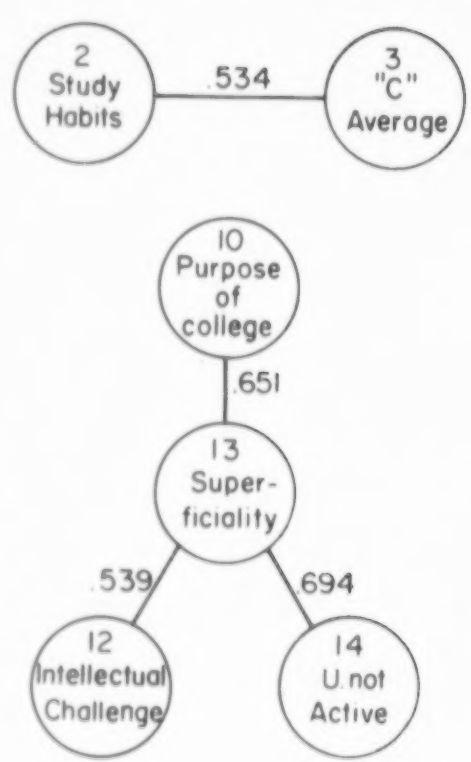
PERSISTERS



Rank order of correlation coefficients

(1) 14 - 13
(2) 13 - 10
(3) 3 - 2
(4) 14 - 10
(5) 8 - 5
(6) 12 - 10
(7) 13 - 12
(8) 14 - 12
(9) 9 - 5

W_{INV}



(1) 14 - 13
(2) 13 - 10
(3) 13 - 12
(4) 3 - 2

of concern for academic problems is unexpected. However, the lack of concern for intellectual challenge and faculty contact on the part of the W_{SOC} group suggests a lack of concern more than a freedom from difficulty in the academic area. The W_{SOC} group, not surprisingly, expresses extreme concern with the large and impersonal nature of the institution and with problems of identification. The intellective-cosmopolitan group expresses strong misgivings about the purpose of college and the superficiality of facets of the college experience, and is noticeably concerned with the failure of the course work to provide an intellectual challenge.

Figure 12 contrasts social withdrawals with religious withdrawals. In spite of the small sample size the profiles do offer some insight. It is striking that on the items for which the mean response of the W_{SOC} group was an extreme in Figure 11, the response of the W_{REL} group in Figure 12 is seen to be at that same extreme. For the academic problem dimensions (study habits, "C" average, and intellectual challenge) these two groups express low concern. On the social dimensions (big and impersonal and identification) their concern is markedly high. In general it would appear that the W_{REL} group has a set of attitudes in common with the W_{SOC} group, but that superimposed on this is a religious orientation (see item on religion) and a conservative-conventional tendency (see items on opposite sex, police, active University, and faculty contact).

Figure 13 attempts to contrast the perceptions of male persisters with those of female persisters--without success.

Figure 14 shows that among the academic withdrawals the sexes diverge on one problem dimension--intellectual challenge. Their integrated response is curiously unremarkable on this basically academic dimension. Partitioned on sex the women's concern on this dimension is extremely low while the men's concern is easily above the average for all respondents.

Figure 15 shows a partitioning of the sexes for the intellective-cosmopolitan withdrawal group. On the item concerned with the size and impersonality of the University the men tended toward the extreme concern expressed by the W_{SOC} group while the women's level of concern was low among "voluntary" withdrawals.

Partitioning on sex appears once again to be a useful and valid procedure since the distinctions which emerged were in both cases dimensions closely peripheral to the expressed reason for withdrawal.

It was possible to compare responses to specific common items between the Michigan followup survey (Cope, 1968) and the Washington survey. On these common items which could be classified as clearly self-critical (study habits and "C" average) the mean levels of concern expressed by all withdrawals in the two surveys was nearly the same (2.02 vs. 2.22 and 1.63 vs. 1.58 respectively).

On those common items more nearly environment-critical (big and impersonal, snobbishness, and faculty contact) the University of Washington withdrawals were less sparing of their criticism (1.44 vs. 1.62, 0.57 vs. 1.14, and 1.50 vs. 2.04 respectively).

This environment-critical attitude may help to explain the relative smallness of the W_{SOC} group in the University of Washington study and the relatively large number of dropouts classified by our subjective means as intellective-cosmopolitan types. A social problem couched in environment-critical terms would tend to be classified as an intellective-cosmopolitan problem.

Conclusions

The Washington survey confirms the necessity of typing withdrawals in recognition of the diversity of that phenomenon. Only after the withdrawal group was partitioned did the structure of the problem emerge. A further partitioning on sex provided additional insights in some cases. Furthermore, the Washington study provides support for the sufficiency of a withdrawal typology based primarily on the main reason given for withdrawing. Moreover, the set of reasons for withdrawing does not appear to have changed significantly between the University of Michigan in 1962 and 1963 and the University of Washington in 1968. In short, the Michigan typology seems to provide a reasonably stable second-order approximation to reality and thus may be useful in interpreting the phenomena called college attrition.

References

Cope, R. G. "Nonresponse in Survey Research as a Function of Psychological Characteristics and Time of Response." The Journal of Experimental Education, 36, (3), 1968, pp. 32-35.

CHAPTER EIGHT

SUMMARY AND IMPLICATIONS

Some of the findings illustrated by these data have indicated factors associated with dropping out for both men and women, and for the different types of dropouts. Some of the findings have shown differential relationship as well.

Sex Roles

In general, objective data[1] on men and women have shown similar relationships. Thus, for both men and women dropping out was found to be related to 1) lower scores on tests of academic competence, 2) less family income, and 3) student origins in the smaller communities and high schools.[2]

However, it was in the attitudinal and value dimensions where more differences were found. And these differences were found to be consistent with the culturally defined roles of men and women in our society. Therefore, data on personality dimensions more central to the feminine role, such as aesthetic and social orientations, were related to withdrawal for female but not for male students. On the other hand, feelings of adequacy and competence, and political orientations which we feel are more closely associated with the masculine role, are related to dropping out for men.

Consequently, we find that one of the major implications of this research is to stress the importance in future research and analysis of taking into consideration sex roles, particularly as they are related to attitudinal and value orientations.

Congruence Model

A congruence model was employed as an underlying conceptual device to examine the match between individual and institutional characteristics. It was assumed that the implications of this match (or lack of fit) may have differed according to the type of dropout. Because we only had press

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[1] Such as demographic characteristics, test scores, high school and college grades.

[2] It should be noted, however, that in some instances objective characteristics can have different meaning for men and women. For example, for women higher attrition was more closely associated with low SAT verbal scores, while for men Jewish background is clearly related to remaining at the University.

data on one institution, it was difficult to make systematic interpretations on how press effects student outcomes; nevertheless, our data suggest that the greatest differentiation between dropouts and persisters appears to be related to those background characteristics that run counter to the major institutional presses. Thus, for example, the more religious student in the highly secular environment was more likely to become a dropout.

We did not, however, find that the presses were related to the different dropout types. This is probably because of the imprecise nature of our measures; thus, we still urge that future research not neglect the possibilities that differential relationships are to be found.

Types of Dropouts

It should not be assumed that the typology used in this study is either specific enough or exhaustive. The possibility of partitioning the types developed here into subtypes must be admitted. Social dropouts, by our definition, may actually enjoy quite diverse political, social and economic backgrounds and may have different perceptions of themselves in relation to the University. Academic dropouts are more easily defined but, as we found, the academic problems are seldom present alone.

Furthermore, the increasing political and social awareness of the student population may produce a new type of dropout. The Washington survey shows persisters to be more acutely concerned than dropouts with the role of the University as an agent for social change. However we might expect to see students withdrawing in protest from the University they perceive not as a discrete entity but as a part of a distasteful society.

The University of Washington survey demonstrates again that a rational division of the withdrawal group is necessary to the understanding of problem areas lost in the averaging of extremes for the unpartitioned group. One would be hard pressed either on the basis of sociopsychological theory or by weight of numbers to defend graduation after four years at a single institution as the norm.

Responses from dropouts suggest that there can be positive aspects to withdrawal, and hence negative aspects to persistence. The demonstrated value of recognizing diversity among dropouts leads us to suggest the need to develop a parallel typology for persisters. Future studies might also focus on other types of institutions. The community college with its comprehensive goals and widely diverse student body should receive more attention.

Entrance Characteristics

While differences or entrance characteristics were found that seem to be related to male and female sex roles according to the dropout types, we did not find the differences to be striking enough to justify the construction of indices which might be used to predict the likelihood of a particular person becoming a particular type of dropout.[1] Thus we feel that our data on entrance characteristics should be regarded as an exploratory sketch rather than a definitive analysis. We had the choice of conclusively demonstrating trivial relationships[2] or attempting to be more provocative about matters of importance. In keeping with the latter outcome we wish to emphasize that future research and administrative practice be more responsive to individual personality orientations and goals, especially as they are related to the developmental tasks and needs of college age men and women: the development of competence and self esteem, the management of emotions, the need for interpersonal friendships, the development of personal autonomy, the development of identity, and so on.

The theoretical framework for future studies of these developmental tasks is still primitive, but we feel the kinds of data to be gathered are found in the range of questions already available in this and related investigations. The items from the entrance questionnaires, the Omnibus Personality Inventory and the followup questionnaires should be applied in replicative investigations.

Furthermore, we view the dropout phenomenon as only one among other indications of strain. For example, research on characteristics of students using the counseling and psychological services may show different patterns of attitudes. Thus, future attempts to understand the dropout should be considered within still broader research programs and administrative conceptualizations of the relationship of a college or university and the needs of its student population.

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[1] We actually, however, had anticipated that more definitive differences would have materialized when the proposal was written.

[2] Such as the multiple-correlation between having particular needs and the likelihood of becoming an academic dropout, e.g., $R=.24$, $p < .001$, explains 5.8 percent of the variance.

Conclusion

Research on students has increased substantially over the past decade. Jacob's survey which concluded by saying that the college had minimal impact on the students was undoubtedly a major stimulus. The Learned and Wood, Newcomb, Chickering, Katz, and Vassar studies have provided benchmarks as well as some integration of our expanding knowledge. We hope this study, while exploratory, has generated some useful knowledge which will be integrated into the theoretical synthesis that is clearly needed. We hope, also, that the conceptualizations will be of some value to persons counseling, teaching, admitting, and so on, and useful to persons making decisions about educational policy, institutional organization, and institutional administration.

APPENDIX A

ENTRANCE QUESTIONNAIRE

FIRST, SOME QUESTIONS ON YOUR FEELINGS ABOUT COLLEGE AND MICHIGAN.

1. Have any of your relatives attended the University of Michigan, now or previously? (Check as many of the following as apply)

   _____ Father

   _____ Mother

   _____ Brother

   _____ Sister

   _____ Other relatives

   _____ No relatives have attended Michigan.

2. Will all your brothers and sisters probably attend college, or will some of them settle down without going to college? (Check one)

   _____ Probably all will go (or all have been)

   _____ Probably one or more will not go

   _____ I have no brothers or sisters

3. About how much will the sources below be contributing to the costs of your education (including living expenses) this year? (Check one for <u>each</u> source.)

	All or nearly all	More than half	About half	Less than half	None
Parents, wife, or husband	___	___	___	___	___
Own part-time and summer work	___	___	___	___	___
Scholarship	___	___	___	___	___
Other (Please specify) _____	___	___	___	___	___

4. People have different ideas about <u>what they look forward to in college</u>, or <u>what they hope to achieve there</u>. Please indicate how important <u>each</u> of the following ideas is to you, according to this scheme:

Write in <u>++</u> if the idea is of great importance

Write in <u>+</u> if the idea is of moderate importance

Write in <u>0</u> if the idea is of little or no importance

____ Getting prepared for marriage and family life

____ Thinking through what kind of occupation and career I want, and developing some of the necessary skills

____ Having fun; enjoying the last period before assuming adult responsibilities

____ Exploring new ideas -- the excitement of learning

____ Establishing meaningful friendships

____ Finding myself; discovering what kind of person I really want to be

____ Opportunities to think through what I really believe, what values are important to me

____ Developing a deep, perhaps professional grasp of a specific field of study

PLEASE READ CAREFULLY -- 4a. Now, go back and look at <u>those that you rated ++</u>. Put a "1" in front of the one that is <u>most important</u> to you, and a "2" in front of the one that is <u>second-most important</u>.

5. What were your <u>first three</u> choices for college, in order of your preference?

1st choice _____

2nd choice _____

3rd choice _____

6. How sure are you that you made the right choice in coming to Michigan? (Check one)

_____ Very sure

_____ Fairly sure

_____ Not at all sure

7. What part would you say that your parents played in your decision to come to Michigan? (Check one statement for father and one for mother)

	Mother	Father
It's largely at his (her) insistence that I am here	___	___
Played a critical role in the decision -- really helped me think it through	___	___
Played a supportive, encouraging role -- was interested, but I really thought it through myself	___	___
Had very little to do with it	___	___
Was really against my decision	___	___
Parent deceased	___	___

8. How important is it to you to graduate from college? (Check one)

_____ Extremely important

_____ Fairly important

_____ Not very important

9. Below are some reasons which may be important in deciding which college or university to go to. Go through the list quickly and check each one that was important to you in selecting Michigan.

_____ Very good college for training in my field

_____ Good athletic program

_____ High academic standing

_____ Close to home

_____ Didn't want to be too close to home

_____ Low-cost college, chance to work

_____ Co-educational college

_____ Receipt of a scholarship

_____ Influence or wishes of mother

_____ My friends are going here

_____ Wanted to go to a different place than where others in my family had gone

_____ Intellectual reputation of Michigan

_____ Rewarding social life on campus

_____ Very good college for my intellectual development

_____ Family tradition

_____ Influence or wishes of father

_____ Influence or wishes of high school teacher

_____ Couldn't go to the college of my real choice

_____ Wanted to go to a different place than where my friends were going

_____ My sister (brother) is already going to Michigan

PLEASE READ CAREFULLY --9a. Now go back over all the items that you have checked, and rank the three of them that were the most important in your decision to come here. Put a "1" before the one of greatest importance, a "2" before the next-most important, and a "3" before the one third in importance.

NOW, SOME QUESTIONS ON YOUR PLANS AND EXPECTATIONS FOR COLLEGE.

10. Do you have a major or an academic field of interest in mind now?

_____ Yes (Answer Question 10a)

_____ No (Answer Question 10b)

10a. (IF YES)

What is it? _____

How certain are you that you will major in this field of interest? (Check one)

_____ Very certain

_____ Fairly certain

_____ Not too certain

10b. (IF NO)

What majors are you considering?

_____

11. How do you feel you will handle the work at Michigan? (Check one)

_____ I feel entirely confident that I can handle my work here at Michigan

_____ Generally speaking, I should be able to do the work, but I may have trouble here and there

_____ I expect some trouble in most of my courses but I should manage to get by

_____ I think I may have a great deal of difficulty

12. Check the one of the following which is closest to the grade average you expect to have at the end of this year.

A+	A	A-	B+	B	B-	C+	C	C-	D+	D	D-	E
—	—	—	—	—	—	—	—	—	—	—	—	—

13. Do you expect to continue your education in a graduate or professional school after completing your undergraduate degree? (Check one)

_____ Definitely yes

_____ Probably yes

_____ Probably not

_____ Definitely not

_____ Don't know

If you check "definitely" or "probably" yes, in what field of study?

_____

14. How active do you think you will be in extra-curricular activities on campus? (Check one)

_____ Extremely active

_____ Quite active

_____ Moderately active

_____ Not very active

_____ Don't know

If you feel that you will become involved in extra-curricular activities, which do you think you will probably become most involved in?

_____

_____

_____

And now a few questions about living arrangements.

15. First, if you had a free choice, would you prefer to live alone or to have a roommate? (Check one)

_____ Much prefer to live alone

_____ Somewhat prefer to live alone

_____ Somewhat prefer to have a roommate

_____ Much prefer to have a roommate

16. If you were to have a roommate, would you prefer someone you knew before you came to the University or would you prefer someone you didn't know before? (Check one)

_____ Much prefer someone I knew before

_____ Somewhat prefer someone I knew before

_____ Somewhat prefer someone I did not know before

_____ Much prefer someone I did not know before

17. Would you like to affiliate with a fraternity or sorority? (check one)

_____ Yes

_____ No

_____ Uncertain

SOME QUESTIONS ON YOUR EXPERIENCES BEFORE COMING TO COLLEGE.

18. We're interested in the things students do in the way of self-expression -- things they do outside of class, for their own interests. Thinking over the past four years, have you done any of the following? (Check all that you have done during your high school years, and <u>double-check</u> any that you have <u>particularly enjoyed</u>.

_____ Writing poetry

_____ Playing in jazz combo

_____ Playing in school band, orchestra

_____ Acting in plays

_____ Composing music

_____ Writing a play

_____ Arranging orchestrated music

_____ Writing a short story or a novel

_____ Taking part in debates, forensics

_____ Writing feature articles, essays

_____ Doing painting, drawing, or sculpture

_____ Building a car out of old parts

_____ Fixing things (appliances, furniture)

_____ Designing furniture, buildings

_____ Directing a play

_____ Decorating my room, designing clothes

_____ Working on an independent scientific project

_____ Finding mathematical solutions for difficult problems

_____ Inventing something

19. Are there any things which were of very special interest to you during your high school years -- we mean things that had very special meaning to you, something beyond the usual. For example, has there ever been any subject matter, project, topic that you've been really involved in (enough to explore on your own or work on beyond the requirements of a course), or any activity (either school-connected or something unrelated to high school) that you've put a great deal of yourself into, that has had a special meaning to you?

(Don't feel forced to answer yes.)

_____ Yes _____ No, not really

If Yes, what was it?

_____

_____

_____

_____

_____

20. Were you personally friendly with any of your teachers in high school -- that is, teachers you knew well enough to talk with about matters not at all related to school or course work? (Check one)

_____ Yes, with several

_____ Yes, with one or two

_____ No

21. How often, on the average, did you have evening dates during your senior year in high school? (Check one)

_____ Once a month or less

_____ Two or three times a month

_____ Once a week

_____ Two or three times a week

_____ More than three times a week

22. Did you ever go steady during high school?

_____ Yes

_____ No

23. One of the things we're interested in is students' ideas about friendship. To what extent do you feel that a person should try to become close friends with others? (Check one)

_____ Be self-sufficient and don't form close ties with anyone; one doesn't get hurt that way.

_____ Form close ties with only a few people who are really understanding and can be trusted.

_____ Become close friends with anyone you trust; a lot of people can be trusted but a lot cannot.

_____ Try to become close friends with all the people you know; most people will be loyal friends if they know they are trusted, though a few may take advantage of such trust.

_____ Let people know you trust them and want to be close friends with them; they will respond in kind

24. Assuming that they were both nice people, would you rather spend time with a person who is very much like you (in interests, viewpoints, and life-experiences), or with someone who is different, who looks at things from a different perspective? (Check one)

_____ Very much prefer the one who is similar to me

_____ Somewhat prefer the one who is similar to me

_____ Somewhat prefer the one who is different from me

_____ Very much prefer the one who is different from me

25. Did you have any close friends in high school who were very different from you? (Check one)

_____ Yes

_____ No

_____ Didn't have any close friends in high school

If Yes, could you give an example of how the friend was different?

_____

_____

_____

26. Think of the two friends you've been closest to the past year or so. Jot down their first names here, just to be able to refer to them, check whether a boy or a girl, and fill in the other information requested.

	First name	Boy?	Girl?	If going to college this fall, which one?	If not going to college, check here
Friend A	_____	___	___	_____	___
Friend B	_____	___	___	_____	___

27. We'd like to know a little about the things that are important to you in your friendships -- the satisfactions you get from them. On the next page you'll find a list of the kinds of things that students mention in talking about what's important in their friendships. We'd like you to go over this list and think of each of the items in terms of the two best friends you listed in the preceding question.

You'll notice that the list is very varied -- that there are many different kinds of satisfactions one might find in a friendship.

We'd like you to go down the list, rating <u>each</u> friendship on <u>each</u> item, using the following rating scheme:

Write in <u>++</u> if the item is a <u>crucially important</u> aspect of the friendship for you--if it is a major basis of the friendship

Write in <u>+</u> if the item is an <u>important</u> aspect of the friendship for you.

Write in <u>0</u> if the item is not really one of the important aspects of the friendship for you.

IMPORTANT ASPECTS OF THESE FRIENDSHIPS TO ME

	Friend A	Friend B
This friend is different from me in some basic ways--I find the difference(s) interesting and challenging.	___	___
This friend broadens my social life--helps me meet other people, helps get me dates.	___	___
This friend helps me with my studies	___	___
This friend is someone I look up to and learn from--ways of behavior, or ideas, or just what this friend is as a person.	___	___
This friend is someone I've depended upon and leaned on--someone I've needed for support	___	___
This friend depends on me and needs me--the good feeling I get from being someone this friend depends on.	___	___
My relationship with this friend is easy, relaxing, "comfortable".	___	___
This friend is someone I share my deepest personal feelings with--my confusions and self-doubts	___	___
I have stimulating talks with this friend--intellectual exchange, exchange of ideas	___	___
This friend and I share a lot of activity interests--we like doing the same kinds of things	___	___
This friend and I have similar values about things--with this friend I get support for some of my basic values	___	___
This friend admires me, looks up to me--it gives me self-confidence, it's good for my ego	___	___

PLEASE READ CAREFULLY

--27a. Now for <u>each</u> friend, please go back to all items you have marked ++ and, for <u>each</u> friendship, rank the <u>two</u> items that you feel are most crucial for the friendship -- rank a "1" for the <u>most crucial</u> and a "2" for the <u>next-most crucial</u>. First rank the two most crucial items for Friend A, and then rank the two most crucial items for Friend B.

NOW, SOME QUESTIONS ABOUT YOUR FAMILY

28. We would like to know in what ways you feel you are like your parents.

List one or two ways in which you feel you are like your <u>father</u>.

_____

_____

_____

_____

List one or two ways in which you feel you are like your <u>mother</u>.

_____

_____

_____

_____

_____

_____

29. Which of your parents do you feel you are most like? (Check one)

_____ My father

_____ My mother

30. Do your parents do much serious reading?
(Check one alternative for father and one for mother.)

	Father	Mother
Does a great deal of serious reading	____	____
Does some serious reading	____	____
Does little serious reading	____	____
Parent deceased	____	____

31. Most people have some disagreement with their parents about some things. How much do you feel you disagree with your parents about the following matters?

Use the following symbols in responding to the items in this question.

0 means "little or no disagreement about this"

1 means "some disagreement about this"

2 means "a good deal of disagreement about this"

In every case, please respond in terms of how you feel about the matter, regardless of whether or not agreement or disagreement has been openly expressed. Answer each item for both father and mother.

	With Father	With Mother
Values about what's important in life	___	___
Political preferences and beliefs	___	___
Religious beliefs	___	___
My vocational plans	___	___
The people I've dated	___	___
My choice of friends	___	___
Goals or purposes of a college education	___	___
Interests and taste in books, music, art	___	___

32. How well do you feel your parents understand you and what you want out of life? (Check one alternative for father and one for mother.)

	Father	Mother
Very well	___	___
Fairly well	___	___
Not too well	___	___
Not at all	___	___
Parent deceased	___	___

33. Are there any magazines your parents subscribe to or read regularly?

___ Yes

___ No

If Yes, what are they? _____

_____

_____

34. How close do you feel to your mother and to your father? (Check one alternative for father and one for mother.)

	Father	Mother
Extremely close	___	___
Quite close	___	___
Fairly close	___	___
Not very close	___	___
Parent deceased	___	___

ABOUT YOUR FUTURE LIFE

35. First, as you think of your future life, what is your picture of the way you'd like life to work out for you?

_____

_____

_____

_____

36. People differ in the importance they attach to different areas of life. For some people, for example, an occupation becomes the central aspect of life, a major focus for their energies and a major source of gratifications in life. For other people, major focus may be given to being a parent, participation in community or national affairs, involvement in the world of art or music, etc.

When you think of your life after college, how important do you expect each of the following areas will be to you?

Write in 3 for crucially important - I want my life to center around this area of life.

Write in 2 for very important - I want to have a major focus in this area of life.

Write in 1 for important - but I want my major investments in other areas of life.

Write in 0 for little or no importance

_____ Career or occupation.

_____ Religious beliefs or activities

_____ Marriage, relationship with my husband (wife)

_____ Being a parent, relationship with children

_____ The world of ideas, the intellectual life.

_____ Friendships

_____ Participation as a citizen in the affairs of my community

_____ The world of art and music, the aesthetic life

_____ Involvement in activities directed toward national or international betterment.

37. Have you decided what occupation or type of work you expect to enter after you have graduated or completed any further training? (Check one)

_____ Yes, and very sure of my decision

_____ Yes, and fairly sure

_____ Yes, but not at all sure

_____ No, undecided among 2 or 3 choices

_____ No, don't really know what I want to do

_____ No, I'm not really interested in an occupation; I'm just interested in marriage and a family.

IF YOU HAVE MADE SOME DECISION (EVEN THOUGH YOU ARE NOT AT ALL SURE)

ANSWER QUESTIONS 37a THROUGH 37c ON PAGE 18

IF YOU HAVE NOT MADE EVEN A TENTATIVE DECISION

ANSWER QUESTIONS 37d AND 37e ON PAGE 19.

(FOR THOSE WHO HAVE MADE SOME WORK DECISION)

37a. Please describe, as specifically as you can, the occupation or type of work you think you will enter.

_____

_____

_____

37b. How long have you felt this is something you wanted to do? (Check one)

_____ As far back as I can remember

_____ Since my early High School days

_____ Fairly recently, the past year or two

37c. How much do you feel that the type of work you have chosen expresses your particular talents and interests? (Check one)

_____ It's a unique expression of my talents and interests -- more so than anything else I can think of

_____ It's a good expression of my talents and interests -- but there are one or two others that would be as good or even better.

_____ It expresses my talents and interests -- but there are several others that would be as good or even better.

_____ It's not a particularly good expression of my talents and interests.

PLEASE TURN TO QUESTION 38, PAGE 20

(FOR THOSE WHO HAVE NOT MADE A WORK DECISION)

37d. What, if any, are some of the occupations you are thinking about?

_____

_____

_____

_____

37e. Have you been concerned or bothered about not yet knowing what you want to do? (Check one)

_____ This has bothered me a good deal

_____ This has bothered me somewhat

_____ This has bothered me a little

_____ This has not really bothered me

PLEASE TURN TO QUESTION 38

ON THE NEXT PAGE

38. What part would you say your parents played or are playing in helping you to make or think about an occupational choice? (Check one alternative for father and one for mother)

	Father	Mother
His (her) opinions have been the major influence -- I've pretty much accepted his (her) opinions about an occupational choice	___	___
He (she) has played a critical role in my thinking about this -- is really helping me think this through.	___	___
He (she) has played a supportive, encouraging role -- has been interested, but I am really thinking this through myself	___	___
He (she) has had very little to do with this	___	___
He (she) has been really against my decision	___	___
Parent deceased	___	___

39. If you could have your own choice in the matter, which of the following would you prefer? (Check one)

_____ To work on my own, with nobody over me and nobody under me

_____ To be "top man" in a company or organization; to have the major decisions and responsibilities.

_____ To have a job in a company or organization without the major responsibilities

SOME QUESTIONS ABOUT YOURSELF

40. People differ in the degree to which they think about or worry about the normal problems and decisions of everyday life. Compared to other people you know, how much do you worry? (Check one)

_____ Much more -- I'm a worry wart.

_____ Somewhat more

_____ Somewhat less

_____ Much less -- I am pretty happy-go-lucky

41. In the list below are some of the problems and issues which college freshmen most often mention as sources of concern to them, the things they think about a lot. For each statement, please consider how much you have thought about or been concerned about the issue during the last year or two. Check one alternative for each statement.

	Very concerned	Somewhat concerned	A little concerned	Not at all concerned
ABOUT WORK AND SCHOOL WORK				
a. Deciding on a vocation--will I be able to find any work that will really interest me for my whole life	___	___	___	___
b. Do I have what it takes to succeed in the world	___	___	___	___
c. School--can I make the grade in college	___	___	___	___
d. Success in school--will I be an outstanding student, recognized and rewarded for outstanding work	___	___	___	___
ABOUT FRIENDS AND SOCIAL SUCCESS				
e. Will I be able to make friends in college	___	___	___	___

	Very concerned	Somewhat concerned	A little concerned	Not at all concerned
f. Popularity--will I be socially successful in college, be accepted by the groups I want to get into	___	___	___	___
g. Getting along with members of the opposite sex--will I be able to hold the interest of boys (girls) I like	___	___	___	___
h. Sexual standards--deciding what my own standards are or should be	___	___	___	___
ABOUT LOVE AND MARRIAGE				
i. Whether I will get married --find someone I love and want to marry who wants to marry me	___	___	___	___
j. Whether I can have a happy and stable marriage	___	___	___	___
k. Whether anyone could love me enough to want to marry me	___	___	___	___
l. Whether I am capable of consistent and continuing love for one person	___	___	___	___
ABOUT HAVING CHILDREN				
m. Whether I want to have children	___	___	___	___
n. Whether I can accept the responsibilities of being a parent	___	___	___	___
o. Whether I can raise happy and healthy children	___	___	___	___
ABOUT MY FAMILY				
p. Getting along with my parents --the fact that I have problems with my parents	___	___	___	___

	Very concerned	Somewhat concerned	A little concerned	Not at all concerned
ABOUT MYSELF				
q. Problems of concentrating--the fact that I am restless and bored, unable to concentrate for very long	___	___	___	___
r. A feeling that I am always acting, never being true to myself or being myself	___	___	___	___
s. Whether I am developing normally	___	___	___	___
t. Social sensitivity--a feeling that I get hurt too easily	___	___	___	___
u. Having a bad temper, the fact that I get angry too often and too easily	___	___	___	___
v. The fact that I don't seem to want to grow up	___	___	___	___

42. When people are worried and troubled they sometimes talk it over with somebody--with family, friends, or other people. When you are worried or troubled about something, do you talk about it with the following people? (Check how often you talk about such things with each of the people listed)

	Often or usually	Sometimes	Rarely	Never
Mother	___	___	___	___
Father	___	___	___	___
Brother	___	___	___	___
Sister	___	___	___	___
High school teacher	___	___	___	___
Boyfriends	___	___	___	___
Girlfriends	___	___	___	___

Don't have problems or worries _____

43. How much have you thought about the questions, "Who am I? What do I want? What will I become?"? (Check one)

_____ A great deal; this is the thing I think about most

_____ I think about it quite frequently

_____ Rarely, only occasionally

_____ Not at all--I have always taken myself pretty much for granted

44. How self-critical are you--how often do you have the feeling that you're missing your own ideals by some margin--never quite living up to your ideals? (Check one)

_____ Very self-critical--I feel this way most of the time

_____ Somewhat self-critical--I feel this quite often

_____ Not very self-critical--I feel this rarely

_____ Not at all self-critical--I never feel this way

45. We are interested in what students do in their leisure time. Please check, for each of the activities listed at left, whether you have done it, and how much you enjoyed it. (Check one for each item)

	Have done this, enjoyed it very much	Have done this, enjoyed it moderately	Have done this, did not enjoy it much	Have rarely done this
Reading poetry	___	___	___	___
Reading fiction	___	___	___	___
Reading biography	___	___	___	___
Reading history	___	___	___	___
Listening to serious or "classical" music	___	___	___	___
Listening to jazz	___	___	___	___
Listening to folk music	___	___	___	___
Listening to popular music	___	___	___	___

46. Now, we would like you to think about yourself and how you might describe yourself as a person. On the next page are some characteristics used by many people in describing themselves. Each characteristic is represented graphically by a scale.

PLEASE INDICATE THE LOCATION ON EACH SCALE WHERE YOU PRESENTLY PICTURE YOURSELF BY AN: X

If you feel that one or the other end of the scale is <u>extremely</u> related to what you are like as a person, place your X as follows:

warm X : ___ : ___ : ___ : ___ : ___ : ___ cold

or

warm ___ : ___ : ___ : ___ : ___ : ___ : X cold

If one end is <u>quite</u> <u>closely</u> related to what you are like as a person, X as follows:

warm ___ : X : ___ : ___ : ___ : ___ : ___ cold

or

warm ___ : ___ : ___ : ___ : ___ : X : ___ cold

If one end is only <u>slightly</u> related to what you are like as a person, X as follows:

warm ___ : ___ : X : ___ : ___ : ___ : ___ cold

or

warm ___ : ___ : ___ : ___ : X : ___ : ___ cold

If both ends of a particular scale seem <u>not</u> <u>at</u> <u>all</u> relevant to what you are like as a person, or if both ends of the scale seem <u>equally</u> <u>relevant</u>, place your X in the middle: (PLEASE USE THIS CATEGORY ONLY WHEN YOU FIND IT COMPLETELY IMPOSSIBLE TO X EITHER SIDE OF THE SCALE).

Please do not be concerned with the way your answers would be judged by others; this is completely irrelevant here. Remember, you are describing yourself <u>to</u> <u>yourself</u>--not to other people. The only requirement is that you be honest with yourself.

MYSELF AS A PERSON

Please be sure to check each scale with an X

social	___:___:___:___:___:___:___	solitary
free	___:___:___:___:___:___:___	constrained
masculine	___:___:___:___:___:___:___	feminine
handsome	___:___:___:___:___:___:___	plain
rigid	___:___:___:___:___:___:___	spontaneous
religious	___:___:___:___:___:___:___	agnostic
soft	___:___:___:___:___:___:___	hard
impulsive	___:___:___:___:___:___:___	deliberate
interested in others	___:___:___:___:___:___:___	interested in self
politically conservative	___:___:___:___:___:___:___	politically liberal
strong	___:___:___:___:___:___:___	weak
closed	___:___:___:___:___:___:___	open
sensitive	___:___:___:___:___:___:___	insensitive
happy	___:___:___:___:___:___:___	unhappy
rely on own opinions	___:___:___:___:___:___:___	rely on others' opinions
conventional	___:___:___:___:___:___:___	unconventional
artistic	___:___:___:___:___:___:___	inartistic
clever	___:___:___:___:___:___:___	not clever
active	___:___:___:___:___:___:___	quiet
relaxed	___:___:___:___:___:___:___	tense
anxious	___:___:___:___:___:___:___	confident
competent	___:___:___:___:___:___:___	not too competent
happy go lucky	___:___:___:___:___:___:___	serious
successful	___:___:___:___:___:___:___	not too successful
depend on others	___:___:___:___:___:___:___	others depend on me
warm	___:___:___:___:___:___:___	cold
intellectual	___:___:___:___:___:___:___	non-intellectual
practical	___:___:___:___:___:___:___	a dreamer

47. Even people who are pretty happy about themselves would often like to be different in some ways. If you could change anything about yourself, what would you like to change?

_____

_____

_____

_____

_____

The next two questions are concerned with how you <u>evaluate</u> your present picture of yourself.

48. First, on the following scale, please rate your overall level of self-evaluation or self-esteem; that is, how high or low you presently <u>evaluate your total picture of yourself</u>. (Use an X)

High ___:___:___:___:___:___:___ Low

49. Different people's evaluations of themselves hinge on different things. On the next page is a list of some of the characteristics you rated in describing your present picture of yourself. Now, we would like you to consider how <u>important</u> each of these characteristics is <u>for your evaluation of yourself</u>.

In deciding how important each characteristic is in your self-evaluation, think of importance in the following way:

> If I were suddenly to see myself as closer to the end of the scale which is <u>less</u> desirable to me, how much would this one characteristic lower my total evaluation of myself

IMPORTANCE OF DIFFERENT CHARACTERISTICS FOR MY TOTAL SELF-EVALUATION

Using the preceding definition of importance, rate the importance of each of the following characteristics according to the following scheme:

Write in 3 for Extremely important to your self-evaluation

Write in 2 for Very important

Write in 1 for Important

Write in 0 for Little or no importance

_____ Masculine - Feminine

_____ Handsome - Plain

_____ Rigid - Spontaneous

_____ Soft - Hard

_____ Interested in others - Interested in self

_____ Politically conservative - Politically liberal

_____ Sensitive - Insensitive

_____ Happy - Unhappy

_____ Rely on own opinions - Rely on others' opinions

_____ Conventional - Unconventional

_____ Clever - Not clever

_____ Active - Quiet

_____ Anxious - Confident

_____ Depend on others - Others depend on me

_____ Religious - Agnostic

_____ Intellectual - Non-intellectual

_____ Artistic - Inartistic

_____ Practical - A dreamer

50. The following statements refer to some very general attitudes toward life. Each of these statements may or may not be true of you. Mark each statement in the left margin according to whether it is true as applied to you or false as applied to you. Please mark every one. Write T if it is true or mostly true, and F if it is false or mostly false.

_____ I often find myself, in the middle of some social gathering or in the midst of some activity, wondering suddenly what the point of life is or feeling that nothing has much meaning

_____ I tend to look back at an earlier period of my life as the best or happiest, and to feel that somehow things will never be as good again

_____ I always seem to be promising myself that the next stage of life will be better or happier, that then I will take hold and live it fully and well.

_____ I don't seem to need a philosophy of life. I never really felt that life might be without meaning. I just live and enjoy myself.

_____ I am usually absorbed in the present. I don't look backward or forward very much.

51. Which of the following statements would you say comes closest to describing your attitude toward death? (Check one)

_____ I never think about death at all: I have never experienced the death of anyone close and I have had no reason to think about it.

_____ I have thought about death and fear it, like most people

_____ I have thought about death and have sometimes felt that human life is meaningless and insignificant since it is so brief and ends so miserably.

_____ I hate the idea. It makes me very angry.

_____ I have thought about death, but within my religious beliefs I have come to terms with it and am not afraid of it.

52. If you were told that you were seriously ill and had to have an operation, which of the following do you think would be closest to your reaction? (Check one)

_____ I'd accept the fact and arrange to have the operation as quickly as possible; I'd try not to brood or worry over it--I'd get it over with

_____ I'd worry first, stew about it a while, but go ahead with the operation

_____ I'd be terrified

_____ I'd read as much as I could about the illness and operation. I'd feel better knowing everything I could find out before I had it

53. If you let yourself go and really dream, which of the following would you rather be? (Rank the <u>three</u> that you would most want to be, placing a "1" in front of the one you want most, and a "2" and "3" in front of your next two choices)

_____ Very beautiful (handsome) and attractive to the opposite sex

_____ Very rich - from a rich family

_____ Famous for my work, some outstanding achievement

_____ A simple person - able to live a life of daily enjoyment, without needing any great peaks, but at the same time never hitting any low depths

_____ A creative person, richly gifted with talent, imaginativeness, an original view

_____ A person of extraordinary social poise, completely at ease in any social gathering.

_____ A leader, an influential person

ABOUT SOME OF YOUR OPINIONS AND VALUES

54. College sometimes brings a change in ideas, beliefs, or values--such things as religious beliefs, political beliefs, ways of viewing people. Do you think that you will change in things like this? (Check one)

_____ Will probably change a great deal

_____ Will probably change somewhat

_____ Will probably change very little

_____ Have no idea if I'll change

55. Below are listed six important areas, or interests, in life. People differ in the emphasis or degree of importance that they attribute to each of these interests.

Please rank the six interests in terms of their IMPORTANCE TO YOU. Insert "1" before the area of greatest importance, "2" before the next most important to you, and so on down to "6" representing the least important to you.

Please note: Your response should be made to the complete statement about each of the interests, and not just to the first word, which is only a convenient label; what that word means to you may not at all correspond to the statement following.

_____ Theoretical: empirical, critical, or rational matters--observing and reasoning, ordering and systematizing, discovering truths.

_____ Economic: that which is useful and practical, especially the practical affairs of the business world; preference for judging things by their tangible utility.

_____ Aesthetic: beauty, form, and harmony for its own sake; an artistic interpretation of life.

_____ Social: human relationships and love; interest in human beings for their own sake.

_____ Political: power and influence; leadership and competition

_____ Religious: religious experience as providing satisfaction and meaning; interest in relating oneself to the unity of the universe as a whole

Now we would like to get your opinions on issues that have appeared in the news lately...

56. Please indicate how you feel about <u>each</u> of the following statements:

	Strongly Agree	Agree	Disagree	Strongly Disagree
The way they are run now, labor unions do this country more harm than good	___	___	___	___
Big companies control too much of American business	___	___	___	___
A former member of the Communist Party who refuses to reveal the names of Party members he had known should not be allowed to teach in a college or university	___	___	___	___
There is too much conformity among American college students	___	___	___	___
Legislative committees should not investigate the political beliefs of university faculty members	___	___	___	___
Books and movies ought not to deal so much with the unpleasant and seamy side of life; they ought to concentrate on themes that are entertaining or uplifting	___	___	___	___
The government should have the right to withhold relevant FBI files from defendants in criminal cases, when opening the files to them might reveal the names of confidential informants	___	___	___	___
It is proper for the government to refuse a passport to a Socialist	___	___	___	___

57. If a Negro with the same income and education as you have moved into your block, would it make any difference to you? (Check one)

_____ Yes, it would make a difference

_____ No, it wouldn't make any difference

_____ Don't know if it would

58. Do you think most Negroes in the U.S. are being treated fairly or unfairly? (Check one)

_____ Fairly

_____ Unfairly

_____ Don't know

59. How do you think your opinions on issues of race relations would compare with your parents' opinions? My parents' opinions would be: (Check one)

_____ More liberal than mine

_____ About the same as mine

_____ More conservative than mine

_____ One parent more liberal; the other more conservative

_____ Can't answer the question. (Parents dead; they have no opinions on such issues; etc.)

60. What is your opinion about the recently established Peace Corps? (Check one)

_____ An excellent program about which I am enthusiastic

_____ A good idea of which I am very much in favor

_____ A good idea but I am not enthusiastic

_____ Probably a good idea but I am not enthusiastic

_____ Probably not a good idea but I am not sure

_____ Definitely not a good idea

_____ Don't know enough about it to have an opinion

61. Please indicate how you feel about each of the following important public issues.

	Strongly Approve	Approve	Indif-ferent	Oppose	Strongly Oppose
Negro student sit-ins	___	___	___	___	___
Firm U.S. action against the Castro government in Cuba	___	___	___	___	___
Increased spending for defense	___	___	___	___	___
Congressional investigations of "Un-American Activities"	___	___	___	___	___
Agreement with the USSR to end nuclear testing	___	___	___	___	___
Increased student interest in political action	___	___	___	___	___
Social Security coverage for medical care of older people	___	___	___	___	___

Now for some questions dealing with politics.

62. About how much interest would you say you have in national and world affairs? (Check one)

_____ A great deal

_____ A moderate amount

_____ Only a little

_____ None at all

63. Compared with most students you know, how well informed do you consider yourself in national and world affairs? (Check one)

_____ More informed than most

_____ About the same as most

_____ Less informed than most

64. During the past few weeks, how often have you discussed national or world affairs with friends, acquaintances or family? (Check one)

_____ Daily or almost daily

_____ Several times in the past few weeks

_____ Once or twice in this time

_____ Never in this period

65. If the last Presidential election were being held today with the same candidates, which one would you favor? (Check one)

_____ Kennedy

_____ Nixon

_____ Don't know

66. Regardless of immediate issues, how do you usually think of yourself--as a Republican, or Democrat, or what? (Check one)

_____ Republican

_____ Democrat

_____ Independent

_____ Socialist

_____ Other (Please specify) _____

67. What party does (or did) your father usually support in national elections?

_____ Republican

_____ Democratic

_____ Sometimes one, sometimes the other

_____ Other (Please specify) _____

SOME BACKGROUND INFORMATION

1. How old are you?

   _____ (and) _____
   years months

2. Check whether you are male _____ or female _____.

3. Check one of the following places which best describes the place where you lived most of your life.

   _____ On a farm or in a village (2,500 population or less)

   _____ In a town (2,500 to 9,999)

   _____ In a small city (10,000 to 49,999)

   _____ In a medium city (50,000 to 200,000)

   _____ In a metropolitan city (200,000 or over)

   _____ In a suburb of a metropolitan city close to and almost part of the city.

4. Where is your home address now? (Please do not answer in terms of school residence)

   _____ _____ _____
   (city) (state) (country)

5. What is your marital status?

   _____ Single, not going steady

   _____ Single, going steady

   _____ Single, engaged

   _____ Married

   _____ Widowed, divorced,separated

6. Are your parents --

_____ Living together?

_____ Separated? What year? _____

_____ Divorced? What year? _____

_____ One or both not living

7. Are you: (Check one)

_____ An only child

_____ The oldest child

_____ The youngest child

_____ None of these

8. How many brothers do you have? _____

9. How many sisters do you have? _____

10. In what country was your father born? _____

Your mother? _____

Father's father? _____

Mother's father? _____

11. What is your family's religious background? (Check one)

_____ Both parents Protestant

_____ Both parents Roman Catholic

_____ Both parents Jewish

_____ Both parents Eastern Orthodox

_____ Mixed (Specify: Father _____

Mother _____)

_____ Anything not covered above: Father _____

Mother _____

12. How often do your parents attend religious services? (Check for each parent)

Father	Mother	
____	____	Once a week or more
____	____	Two or three times a month
____	____	Once a month
____	____	A few times a year
____	____	Rarely over the years
____	____	Never
____	____	Parent deceased

13. What is your religious preference?

_____ Protestant (Please specify denomination) _____

_____ Catholic

_____ Jewish

_____ Other (Please specify) _____

_____ None

14. How often do you attend religious services? (Check one)

_____ Once a week or more

_____ Two or three times a month

_____ Once a month

_____ A few times a year

_____ Rarely over the years

_____ Never

15. Do you think of yourself as more religious, about as religious, or less religious than your parents? (Check one for each parent)

	Father	Mother
I am more religious than	____	____
I am about as religious as	____	____
I am less religious than	____	____
Parent deceased	____	____

16. How far did your parents go in school?
(Check one for each parent)

Father	Mother	
____	____	Less than high school
____	____	Some high school (9 - 11 years)
____	____	Completed high school (12 years)
____	____	Some college
____	____	Completed college
____	____	Advanced or Professional degree

17. What is your father's occupation (or, if he is retired or deceased, what was it before)? Kindly give a full answer, such as "high school chemistry teacher", "welder in an aircraft factory", "president of a small automobile agency", "manager of a large department store".

_____

_____

_____

_____

18. Is your father a member of a trade union?

____ Yes

____ No

19. Does your father work for himself or for someone else?

_____ For himself

_____ For someone else

20. At the present time, does your mother have a paying job outside the home? (Check one)

_____ Yes, full time

_____ Yes, part time

_____ No

If Yes, name and describe the occupation in which she works. (Please give a full answer)

_____

_____

_____

21. About how much total income do your parents earn yearly at the present time? (Check one)

_____ Less than $3,999

_____ $4,000 to $7,499

_____ $7,500 to $9,999

_____ $10,000 to $14,999

_____ $15,000 to $19,999

_____ $20,000 and over

How certain are you about this income?
(Check one)

_____ I am quite certain about it

_____ I know it approximately

_____ I'm mostly guessing

HIGH SCHOOL BACKGROUND

22. About how many students were there in your high school graduating class? (Check one)

_____ 49 or less

_____ 50 - 99

_____ 100 - 149

_____ 150 - 199

_____ 200 - 299

_____ 300 - 399

_____ 400 - 499

_____ 500 - 599

_____ 600 and more

23. To the best of your knowledge, what was your academic rank in your high school graduating class? (Check one)

_____ Top 2%

_____ Top 10%

_____ Top 25%

_____ Top 50%

_____ Below top 50%

APPENDIX B

FOLLOWUP QUESTIONNAIRES

No. _____

THE MICHIGAN STUDENT SURVEY

PLEASE NOTE

In this questionnaire you are asked about what you are doing now, why you withdrew from or are not presently registered at the University of Michigan, and questions about the kinds of problems you experienced at the University.

This survey depends on the sincerity and frankness with which questions are answered. There are, of course, no "right" or "wrong" answers.

Your cooperation, a vital factor in the success of the study, is greatly appreciated.

START HERE

1. What are you doing at the present time? (Please be specific. For example: I am a full time student at Cornell University in New York majoring in political science, or I am married and working while my husband attends Iowa State University, and so on.) _____

_____

_____

2. What did you do immediately after leaving the University of Michigan and until now? (For example: I worked as a secretary at Northern Manufacturing Co. for three months and then married, or I transferred as a full time student to Jackson Junior College and then enlisted in the Navy, and so on.)

_____

_____

_____

3. What reason or reasons did you have for withdrawing from the University of Michigan? (Please give as complete an answer as possible. For example: I couldn't seem to find other students like myself that I was happy with so I enrolled at Reed College after my freshman year, or my grades were disappointing to me so I transferred to Central Michigan University, and so on.)

_____

_____

_____

4. In the list below are some experiences or situations which students often describe as problems during the college years. You may have encountered some of these situations during your attendance at the University of Michigan.

For each situation, please consider how much of a problem it was for you at the University of Michigan. Please circle one alternative for each statement.

	A Crucially Important Problem To Me	A Very Important Problem To Me	A Fairly Important Problem To Me	Not too Important A Problem	Not at all Important To Me
A difficulty learning regular study habits--learning what to do during my time allotted for studying	4	3	2	1	0
A disappointment in rushing, not receiving a bid to the house I wanted to pledge.....	4	3	2	1	0
A discouragement because of being placed on academic probation.....	4	3	2	1	0
A concern over earning too many "C's" and the doubt about my record being acceptable to a graduate school.....	4	3	2	1	0
A fear of academic failure--not able to maintain a "C" average	4	3	2	1	0
A disappointment in a relationship with the opposite sex--a hurt, loss, rejection.....	4	3	2	1	0
A disillusionment about friendship or a friend.....	4	3	2	1	0
The difficulty of meeting students with very different standards than my own--ways to act, sexual standards, moral behavior.....	4	3	2	1	0
A feeling that my religious beliefs were constantly being challenged and threatened.....	4	3	2	1	0
A questioning of my own religious faith or beliefs.....	4	3	2	1	0

	Crucially Important Problem To Me	Very Important Problem To Me	A Fairly Important Problem To Me	Not too Important A Problem	Not at all Important To Me
A feeling of being "lost" at Michigan because it is so big and impersonal.....	4	3	2	1	0
An inability to find individuals or groups which were really congenial and with which I felt happy.....	4	3	2	1	0
A shock in meeting people who seemed much more cosmopolitan or had been around more than I.....	4	3	2	1	0
A family financial crisis that affected my plans.....	4	3	2	1	0
A family crisis like death, divorce in the family.....	4	3	2	1	0
A difficulty accepting the "snob" appeal of most social groups on campus.....	4	3	2	1	0
A problem with the police or disciplianry agents of the University.....	4	3	2	1	0
A physical disability, psychological problem or emotional upset.....	4	3	2	1	0
An inability to express my interests and abilities---to express myself.....	4	3	2	1	0
A disappointment in having too little contact with the faculty....	4	3	2	1	0
Other(s) --- please specify:					
_____					
_____					
_____					
_____	4	3	2	1	0

THANK YOU FOR PARTICIPATING IN THIS STUDY

THE WASHINGTON STUDENT SURVEY

PLEASE NOTE

In this questionnaire you are asked what you are doing now, and what kinds of problems you experienced at the University. This survey depends on the sincerity and frankness with which you answer the questions. Your cooperation, the vital factor in the success of the study, is greatly appreciated.

START HERE

1. What are you doing at the present time? (Please be specific. For example: "I am a full time student at the University of Washington majoring in political science", or "I am married and working while my husband attends Oregon State University", etc.)

_____

_____

_____

_____

2. If you are no longer at the University of Washington please give your reason or reasons for leaving. (For example: "I couldn't find other students who shared my interests so I enrolled at Reed College after my freshman year", or "My grades were disappointing so I transferred to Western Washington College", etc.

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3. Below is a list of some experiences and situations which students have often named as having troubled them during their years at college. You may have encountered some of these situations at the University of Washington.

For each situation consider how much of a problem it was or has been for you at the University of Washington.

Please circle ONE alternative for EACH statement.

	Crucially Important to me	Very Important to me	Fairly Important to me	Not too Important to me	Not at all Important to me
A difficulty developing proper study habits--utilizing my time	4	3	2	1	0
A fear of academic failure--not able to maintain a "C" average	4	3	2	1	0
A disappointment in a relationship with the opposite sex--a hurt, loss, or rejection	4	3	2	1	0
A feeling of being lost at the University because it is so big and impersonal	4	3	2	1	0
A concern that my religious beliefs were being challenged and threatened	4	3	2	1	0
A problem with the police or with the disciplinary agents of the University	4	3	2	1	0
A disappointment in having too little contact with the faculty	4	3	2	1	0
An inability to find individuals or groups with whom I could identify	4	3	2	1	0

	Crucially Important to me	Very Important to me	Fairly Important to me	Not too Important to me	Not at all Important to me
Disillusionment with the purpose of a college education	4	3	2	1	0
A disappointment with the "snobbishness" of most social groups on campus	4	3	2	1	0
The failure of the coursework to challenge me intellectually	4	3	2	1	0
Impatience with the superficiality of much that is considered a part of college	4	3	2	1	0
A feeling that the University is not active enough in promoting needed changes in our society	4	3	2	1	0

The foregoing list is by no means intended to exhaust the set of problems encountered by students. Therefore you are invited and encouraged to elaborate some concerns which stand out as important in your experience at the University. (Use extra sheets if necessary.)

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THANK YOU FOR PARTICIPATING IN THIS STUDY

APPENDIX C

OMNIBUS PERSONALITY INVENTORY SCALES

SCALES AND REPRESENTATIVE ITEMS[1]

Scales

Religious Liberalism (RL) - measures how liberal a person is in his ideological commitments, high scores being skeptical of conventional, orthodox religious beliefs and practices.

Estheticism (ES) - measures diverse interest in artistic matters and activities including literature, dramatics, painting, music, and sculpture. High scores have greater interests in these areas.

Complexity (CO) - measures how much a person tends to be comfortable with ambiguity, uncertainty, and novelty. High scorers may prefer complexity to simplicity, and tend to need diversity and avoid excessive structure.

Impulse Expression (IE) - measures readiness to express feeling and seek gratification in conscious thought or action. Low scorers may tend to be rigid and constrained.

Social Maturity (SM) - high scorers are <u>not</u> authoritarian; they tend to be flexible, tolerant, and realistic in their thinking. High scorers are also frequently interested in intellectual and esthetic pursuits.

Theoretical Orientation (TO) - measures interest in science and in scientific method in thinking. High scorers are generally logical, rational, and critical in their approach to problems.

Thinking Introversion (TI) - measures liking for reflective thought, particularly of an abstract nature. High scorers have a greater preference for reflective thought.

Representative Items

Religious Liberalism (RL)

(a) I believe in a life hereafter. (F)

(b) In matters of religion it really does not matter what one believes. (T)

Estheticism (ES)

(a) I enjoy listening to poetry. (T)

(b) I like dramatics. (T)

Complexity (CO)

(a) I dislike following a set schedule. (T)

(b) For most questions there is just one right answer, once a person is able to get all the facts. (F)

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[1]From the 1962 OPI Manual, pp. 4-6.

Impulse Expression (IE)

(a) I find that a well-ordered mode of life with regular hours is not congenial to my temperament. (T)

(b) When I get bored I like to stir up some excitement. (T)

Social Maturity (SM)

(a) I prefer people who are never profane. (F)

(b) Unquestioning obedience is not a virtue. (T)

Theoretical Orientation (TO)

(a) I like to discuss philosophical problems. (T)

(b) My free time is usually filled up by social demands. (F)

Thinking Introversion (TI)

(a) I like to read serious, philosophical poetry. (T)

(b) I study and analyze my own motives and reactions. (T)

APPENDIX D

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